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Weather

WEATHER SUPPORT

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This instruction implements Air Force Policy Directive (AFPD) 15-1, *Air Force Weather Operations*, Air Force Instruction (AFI) 10-206, *Operational Reporting*, AFI 10-229, *Responding to Severe Weather Events*, AFI 15-114, *Functional Resource and Weather Technical Performance Evaluation*, AFI 15-128, *Air Force Weather Roles and Responsibilities*, AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*, Air Force Manual (AFMAN) 15-111, *Surface Weather Observations*, AFMAN 15-124, *Meteorological Codes*, AFMAN 15-129 Volume 1, *Air and Space Weather Operations – Characterization* and AFMAN 15-129 Volume 2, *Air and Space Weather Operations – Exploitation*. It establishes responsibilities and weather support procedures. It also provides general information for weather services, including weather observations and forecasts; weather warnings, watches, and advisories (WWA); space weather data, information dissemination, and base-wide reciprocal support. It applies to units assigned to the 440th Airlift Wing, 43rd Airlift Group, 427th Special Operations Squadron, U.S. Army Company C, 2nd Battalion, 228th Aviation Regiment, U.S. Army Parachute Team (Golden Knights), subordinate units, and units assigned, attached, or supported by Pope Army Airfield. The 440th Operations Group Commander may publish interim changes, as necessary, to effect priority/emergency changes if it applies to all of Pope Army Airfield. Ensure that all records created as a result of processes prescribed in this publication are maintained in accordance with AFMAN 33-363, *Management of Records*, and disposed of in accordance with Air Force Records Information Management System (AFRIMS) Records Disposition Schedule (RDS) located at <https://www.my.af.mil/gess-af61a/afrims/afrims/>. Refer recommended changes and questions about this publication to the

Office of Primary Responsibility (OPR) using the AF Form 847, Recommended for Change of Publication, directly to 440 OSS/OSA, 393 Surveyor Street, Pope Field NC 28308.

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Updated numerous paragraphs, Tables, Figures and Attachments.

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Chapter 1

GENERAL INFORMATION

1.1. General. Although an Army Airfield (AAF), the term Pope Field will be used throughout this publication. Pope Field will be operated under published Air Force Instructions IAW the Senior Airfield Authority Memorandum of Agreement dated 16 May 2011. The Pope Field Weather Unit (WU) is assigned to the Airfield Operations Flight (440 OSA) and provides and/or arranges for weather support to the 440th Airlift Wing, 43rd Airlift Group, 427th Special Operations Squadron, U.S. Army Company C, 2nd Battalion, 228th Aviation Regiment, U.S. Army Parachute Team (Golden Knights) and subordinate units assigned to Pope Field, North Carolina. The WU is the focal point for all weather-related issues. This instruction establishes requirements and procedures pertaining to weather support during peacetime operations and eliminates the need for written agreements between the WU and supported operations. This instruction will be coordinated at the local level to meet mission needs and be reviewed annually and updated as required.

1.2. Background.

1.2.1. According to the CSAF-approved Strategic Plan for AFW Reengineering (8 Aug 97), an Operational Weather Squadron (OWS) will provide Resource Protection, Terminal Aerodrome Forecasts (TAFs), Regional and Operational-Level weather products and information, Meteorological Watch (METWATCH), Pilot-to-Metro Service (PMSV), and Flight Weather Briefing (FWB) support for Air Force locations within designated geographic regions.

1.2.2. The 26 Operational Weather Squadron (26 OWS) at Barksdale AFB, Louisiana will provide regional and operational-level weather products and information to units in the Southeast region of the Continental United States (CONUS).

1.2.3. Based on the guidance in the Strategic Plan, the WU at each Air Force location will focus on providing tactical-level weather products and information needed for mission execution and provide weather products and information to the commander of deployed forces during wartime, contingency, and exercise operations.

1.3. Responsibilities. General responsibilities of the OWS and WU are outlined in AFI 15-128, *Air Force Weather Roles and Responsibilities*. Specific responsibilities of the 26 OWS and Pope's WU are defined in the Installation Data Page signed between the 440 OSS/OSAW and 26 OWS and in this instruction. The 26 OWS issues Pope's TAFs, forecasted weather watches and weather warnings, and may provide flight weather briefings to transient aircrews passing through Pope Field. The 26 OWS will also issue observed advisories and warnings when the WU is closed and the airfield is open. The WU will issue all observed advisories and warnings when open and create tailored Mission Weather Products (MWPs) focused on local missions. Additionally, the WU will support Pope Field by thoroughly educating agencies on weather services and products or as directed by the 440 AW/CC.

1.4. Operational Hours and Contact Information.

1.4.1. Airfield and mission weather services will be provided by 440 OSS/OSAW personnel from 0500-2300L Monday through Friday, except federal holidays, and when the 440 AW

has their monthly Unit Training Assembly (UTA). During UTA weekends the weather hours of operation will vary based on the mission. Hours of operation will be placed in a Notices to Airmen (NOTAM) no later than one week prior to the UTA. Staff services, listed in Chapter 5, are available during normal duty hours or as required (e.g. Operational Readiness Exercises (OREs), Natural Disaster Exercises, etc.). **Normally, support for all Joint Operational Access Exercises (JOAX) will be provided by the Lead Wing's WU. The Lead Wing's WU is responsible for coordinating all weather support requirements for JOAX IAW AFMAN 15-129 Volume 2.** All supported units should coordinate with the 440 OSS/OSAW and provide at least two week's notice to request special or additional support not addressed in this instruction.

1.4.2. Pope Field weather personnel are physically located at 393 Surveyor Street, Building 708, Room 104 between hanger 4 and 5 and can be reached by phone at DSN 424-6543/6544 or Commercial at 910-394-6543/6544 and Telefax at DSN 424-6548 or Commercial 910-394-6548.

1.4.3. The 26 OWS provides 24/7 weather support to Pope Field and transient aircrews and becomes the primary weather support agency when the 440 OSS/OSAW is off duty. The 26 OWS weather technician can be contacted at DSN 331-2639 or Commercial at 318-529-2639.

1.4.4. During 440 OSS/OSAW non-duty hours, there will be an on-call weather technician available in case of the potential for severe weather on Pope Field or equipment/communication outages at either Pope Field or the 26 OWS. The 26 OWS, CP, ATC, and Airfield Operations will have the telephone numbers of all on-call weather technicians.

1.5. Geographic Area of Responsibility (AOR). The area of responsibility for products and services provided by the Pope Field WU is for the terminal area, which is the area located within a 5 nautical mile radius around the center of the Pope airfield complex. Pope weather technicians will Mission Watch (MISSIONWATCH) for all areas and routes in which they produced MWP. MWPs will be tailored for Instrument Flight Rules (IFR), Visual Flight Rules (VFR) missions; local parachute jumps; FWBs; Crisis Action Team (CAT)/Air Force Operations Center (AFOC) briefings; staff briefings; exercise/deployment support; climatology briefings; and resource protection services for Pope Field. Weather products are tailored specifically to meet supported unit requirements. For a definition of a MWP, see paragraph 4.5.

1.6. Duty Priorities.

1.6.1. All WU tasks cannot be accomplished simultaneously. Therefore, duty priorities are established to ensure tasks are accomplished in order of relative importance and publicized to avoid misunderstanding among supported agencies. Duty priorities will ensure timely response to situations under normal conditions. However, the list will not replace good judgment. The weather technician will use Operational Risk Management (ORM) to identify risks and determine the best course of action for any given situation. If necessary, additional WU personnel will be called to work as a team and respond to duty priorities during periods of hazardous/potentially hazardous weather or any other situation affecting operations at Pope Field or any of the flying missions. WU personnel may deviate in the best interest of flight safety and/or protection of personnel or property.

1.6.2. 440 OSS/OSAW Duty Priorities are listed in [Table 1.1](#)

Table 1.1. 440 OSS/OSAW Duty Priority Listing.

| Order Of Priority | Duties |
|--------------------------|---|
| 1 | Perform Weather Flight Emergency War Order (EWO) Taskings |
| 2 | Respond To Aircraft / Ground Emergencies / Mishaps |
| 3 | Respond To Imminent Severe Weather / Disseminate Observed Warnings |
| 4 | Respond To Pilot to Metro Service (PMSV) Contacts |
| 5 | Disseminate Urgent Pilot Reports (PIREPs) Locally and to the 26 OWS |
| 6 | Disseminate Augmented Surface Observations Locally and to the 26 OWS |
| 7 | Perform Coordinated METWATCH Support / Provide “Eyes Forward” Support to 26 OWS |
| 8 | Disseminate Observed Weather Advisories |
| 9 | Perform Severe Weather Action Procedures |
| 10 | Disseminate Routine PIREPs Locally and to the 26 OWS (as required) |
| 11 | Disseminate Augmented Surface Observations and PIREPS Longline |
| 12 | Perform MISSIONWATCH |
| 13 | Provide Scheduled Weather Briefings |
| 14 | Provide Non-Scheduled Weather Briefings |
| 15 | Provide other Weather Information and Briefings |
| 16 | Conduct Weather Functional Training |
| 17 | Accomplish All Other Routine / Administrative Tasks |

1.6.3. 26 OWS Duty Priorities are listed in [Table 1.2](#)

Table 1.2. 26 OWS Duty Priority Listing.

| Order Of Priority | Duties |
|--------------------------|---|
| 1 | Perform 26 OWS Emergency War Order (EWO) Taskings |
| 2 | Respond to Aircraft Ground Emergencies/Mishaps |
| 3 | Execute OWS Evacuation |

| | |
|----|---|
| 4 | Provide Products and Services for Combat, Contingency & Military Operations Other than War Operations (graphics, text bulletins, MOAFS) |
| 5 | Respond to Pilot to Metro Service (PMSV) Contacts |
| 6 | Disseminate Urgent (UUA) Pilot Reports (PIREPs) |
| 7 | Provide Weather Products for Force Protection (forecast weather watches, warnings, etc.) |
| 8 | Prepare and Disseminate Peacetime/Exercise Regional and Operational-Level Graphics and Alphanumeric Products |
| 9 | Prepare and Disseminate Terminal Aerodrome Forecasts (TAFs) |
| 10 | Provide Scheduled Flight Weather Briefings |
| 11 | Provide Non-Scheduled Flight Weather Briefings |
| 12 | Disseminate Routine (UA) PIREPs |
| 13 | Provide other Air and Space Weather Products, Information, and Weather Briefings |
| 14 | Accomplish other Routine Weather Requirements |
| 15 | Accomplish Administrative Tasks |

1.7. Backup Weather Support Procedures.

1.7.1. The WU has generator backup power but in the event that primary and generator power both fail, WU operations will move to the Alternate Operating Location (AOL) as outlined in paragraph 1.8. If the AOL is also without power, the 26 OWS will provide backup support according to the three tiers of mission support outlined in [Table 1.3](#)

Table 1.3. Three-Tier Backup Support Priority Table.

| Tier | |
|----------|---|
| 1 | Products and services supporting wartime, contingency and/or force protection missions that must be backed up via immediate transfer to backup organization, including: Combined/Joint Operations Area Forecast (C/JOAF); forecast weather watches, warnings and advisories, and space warnings; flight weather briefings; military operating area forecasts (MOAF); Controlling Mission Weather Products (CMWP); flight weather hazards in the combatant command AOR; TAFs; CBRNE hazard products (CDMs/EDMs); classified products and services. |
| 2 | Products and services supporting peacetime and/or exercise missions that will be backed up to the greatest extent possible after satisfying Tier 1 requirements including CONUS JOAFs, flight weather briefings, MOAFs, CMWPs, flight weather hazards, TAFs and other products and services. |
| 3 | Products and services supporting peacetime mission planning that will be backed up as resources permit after satisfying Tier 1 and Tier 2 requirements, including long range forecasts, space weather, climatology, staff support and other products and services. |

1.7.2. If weather operations at the 26 OWS are interrupted (e.g., power outage, natural disaster), the 26 OWS will contact the WU or on-call weather technician and backup will be provided according to the three tiers of mission support outlined in [Table 1.3](#) The Pope

Field TAF and WWAs responsibility will be transferred to the 440 OSS/OSAW until such time the 26 OWS is postured to resume operations. Responsibility for other 26 OWS products (e.g., graphical products) will be transferred to other agencies as necessary to continue weather information flow to Pope's supported units.

1.8. 440 OSS/OSAW AOL. In the event of a building evacuation, the WU will move to building 900, room 107A, enroute planning, to continue operational support and "eyes forward" responsibilities for the 26 OWS. The AOL contact phone number is DSN 424-4959, Comm 910 394-4959.

1.8.1. Most WU services/support will be provided but will require a case-by-case assessment dependent on communication line status, equipment status, etc. Expect most services to be somewhat degraded (weather products, pilot briefings, etc.) due to limited facilities and loss of dedicated data services, including sensors and various data types (Meteorological Satellite (METSAT), Weather Radar, etc.). Also, the AOL has a limited view of the airfield making visibility observations, if needed, difficult to evaluate.

1.8.2. PMSV services will be discontinued at Pope Field. However, Andrews AFB will be contacted to monitor the radio frequency and answer applicable calls since they are on the same frequency as Pope Field. The WU will also notify ATC, CP, and Airfield Operations. ATC can act as a relay for weather information to airborne aircraft and the CP can initiate phone patches to allow forecasters direct contact. For long term evacuations, the WU will coordinate with Airfield Operations to publish Notices to Airmen (NOTAMS).

1.8.3. WU personnel will follow duty specific Standard Operating Procedures (SOPs) and WU evacuation checklists to resume weather services at the AOL as soon as possible.

1.8.4. The 26 OWS will assume the following duties until the WU resumes weather services:

1.8.4.1. Perform METWATCH for Pope Field operations and issue all terminal and flying area WWAs to the best of their ability since access to observing sensing equipment readouts may be lost.

1.8.4.2. If the WU is unable to stand up support at the AOL in a timely manner, the WU will provide flight information to the 26 OWS and they will assume responsibility for all missions departing Pope Field and conduct limited MISSIONWATCH for these and any other flights already in the air.

1.8.5. Once the WU arrives at the AOL, they will stand-up operations as soon as possible and notify the 26 OWS, ATC, CP, Airfield Operations, and all of the flying squadrons that they have resumed operations at the new site. Wind and pressure values from any form of backup equipment will be estimated while at the AOL. The WU will insert the proper remark in the observation (e.g., WND DATA ESTMD, ALSTG/SLP ESTMD) in column 13 of AF Form 3803/3813, *Surface Weather Observations (METAR/SPECI)*.

1.8.6. All affected agencies will be notified of the subsequent return of the WU to the primary work center.

1.9. Release of Weather Information. Weather information will not be released to non-DoD agencies or the general public without approval from the Pope Field Public Affairs and Legal offices. Any questions/clarifications will be coordinated through the Weather Operations Manager (WOM).

1.10. Post-Mission Analysis/Feedback. Per AFMAN 15-129 Volume 2, *Air and Space Weather Operations-Processes and Procedures – Exploitation*, Chapter 2, units that regularly utilize weather support from Pope's WU will provide post-mission/utilization feedback, when possible. This information will be used to ensure proper quality assurance (QA), develop internal processes to improve product accuracy and forecast proficiency, and to provide a metrics database.

1.10.1. Formal/informal feedback methods include:

1.10.1.1. Web-based feedback located on the Pope Weather Webpage <https://cs3.eis.af.mil/sites/21228/SitePages/Weather%20Home.aspx> Operations Feedback link.

1.10.1.2. Transient (faxed) and local weather briefing feedback forms (located at the forecast counter) will be provided with every briefing.

1.10.1.3. Email post-mission feedback to 440.OSS.Wx@us.af.mil and/or phone calls to the WOM (DSN 424-6553, Comm 910 394-6553).

1.10.1.4. Routing through the mail system.

1.10.1.5. Face to face feedback after any completed mission.

1.10.2. Representative sample sizes are necessary to accurately reflect the satisfaction with and accuracy of the weather support being provided to Pope's flying units and other agencies by the WU.

1.10.3. The WOM will compile all feedback and establish a monthly summary to determine positive and negative trends. This documentation will be used to improve MWP's and negative trends will be corrected by assigning additional training.

1.11. Mishap Procedures. When the airfield is advised of an emergency or mishap, the WU will ensure applicable data used in the development of any weather product and/or service provided is saved for an investigation (to include 175-1 weather briefing, space weather products, mission impact slides, etc.). The 26 OWS will save enough data before and after the mishap to fully reconstruct the environmental conditions. The WU will coordinate with the 26 OWS to initiate a data save for OWS-produced/provided products used in preparing weather products/services. If the WU used products from other OWSs to support missions crossing AORs, they must coordinate with all applicable OWSs to initiate a data save. If the OWS provided weather products/services, they will coordinate the data save with all Air Force Weather (AFW) units involved. The WU at the departure installation and the mishap location (if on a military installation) will follow the Aircraft Mishap procedures in AFMAN 15-129 Volume 2, *Air and Space Weather Operations – Exploitation*, Chapter 3.

1.12. Operational Report (OPREP)-3 Reporting. The 440 OSS/OSAW will provide information for an OPREP-3 report when the CP requests it for the occurrence of Significant/Severe Weather, Natural Disasters, Aircraft/Ground Mishap, or CBRNE event. For these purposes, the following events may require weather information and an OPREP-3: tornado, surface winds of 50 knots or greater (sustained or gust), hail 3/4 inch or greater, lightning strikes, snowstorms, Aircraft/Ground Mishap, or CBRNE Event. The CP will then initiate the OPREP-3 report at the discretion of the Wing Commander. Upon request from the CP, the WU will provide them with additional data that includes the actual significant or severe

weather experienced, forecast valid at the time of the occurrence to include any watches or warnings issued (include actual and desired lead time), the operational status of meteorological equipment (e.g. radar, wind sensors, etc.) at the time of the event, and any other pertinent information. The CP will forward an OPREP-3 report to higher headquarters as required in accordance with AFI 10-206, *Operational Reporting*. The WU will notify the 26 OWS and AFRC/A3VA of the OPREP-3 report and the information submitted.

Chapter 2

AIRFIELD SERVICES

2.1. General. Airfield services include those actions that affect Pope Field and aerodrome (defined within 5 miles of the airfield). Examples include weather observations, Pilot-to-Metro Service (PMSV), and resource protection. Resource protection will be addressed in Chapter 7.

2.2. Continuous Weather Watch. Pope Field is considered an automated weather station, meaning the Automated Meteorological Observing System (FMQ-19) performs an automatic continuous weather watch.

2.3. Basic Weather Watch (BWW): When augmentation (supplementing or back-up) to the FMQ-19 is required, Pope Field WU personnel will perform a BWW. Due to the additional duties in the station, weather personnel cannot detect and report all weather changes as they occur but will use ORM to determine duty priorities. The minimum requirement is to re-check the weather conditions at intervals not to exceed 20 minutes since the previous observation. Re-check to determine the need for a SPECI observation when the following conditions are observed to be occurring or are forecasted to occur within 1 hour:

2.3.1. Ceiling forms below or decreases to less than 1,500 feet.

2.3.2. Ceiling dissipates, or increases to equal or exceed 1,500 feet.

2.3.3. Visibility decreases to less than 3 miles.

2.3.4. Visibility increases to equal or exceed 3 miles.

2.3.5. Precipitation (any form).

2.3.6. Thunderstorms.

2.3.7. Fog or Mist.

2.3.8. All supplemental criteria.

2.3.9. During mandatory back-up of FMQ-19.

2.3.10. In addition to the above minimum requirements, weather technicians will remain alert for any other changes in weather conditions that will require a SPECI observation. Weather technicians will also monitor local area observational and forecast products as often as necessary to keep abreast of changes expected to affect their area of responsibility.

2.4. Cooperative Weather Watch: Pope Field is an automated weather station and the WU has established a cooperative weather watch with ATC, and other appropriate base/post agencies, as required. Of primary concern is the report of tower visibility different from the prevailing surface visibility, local Pilot Reports (PIREP), and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources. When a reliable source (tower personnel, pilots, etc.) reports a weather condition different from the last disseminated observation (different visibility) weather personnel will reevaluate the different weather condition to determine if the FMQ-19 is operating correctly or needs to be logged out and back-up implemented. The WU will use ORM to supplement for a weather condition that is beyond the capability of the FMQ-19 to detect (e.g.

fog bank). Certified control tower personnel will alert the WU technician, via hotline, when the following weather changes occur:

- 2.4.1. Tower visibility decreases to less than, or increases to equal or exceed 4 statute miles.
- 2.4.2. Tower visibility is less than 4 statute miles and different from the surface prevailing visibility.
- 2.4.3. A PIREP is received (pass to weather within 5 minutes of receipt).
- 2.4.4. Precipitation begins or ends.
- 2.4.5. Any indication of convective activity (lightning, rain showers or cumulonimbus clouds on the horizon).
- 2.4.6. Rapid development, clearing, lowering, or rising of cloud layers.
- 2.4.7. Any weather condition that could have an impact on the safe operation of the airfield. If the airfield closes, airfield leadership will ensure the runway lights be left on for the FMQ-19 RVR sensors to work properly in case the possibility exists for an emergency aircraft divert into Pope Field.

2.5. Eyes Forward/METWATCH: METWATCH is a controlled and organized approach for WU personnel to maintain situational awareness of the current/future meteorological situation within a designated area(s). Pope weather technicians are the eyes forward for 26 OWS weather technicians and integrate weather radar data, meteorological satellite imagery, lightning detection readouts, and non-standard weather data systems (vertical profilers, mesonet data, etc.) to create an integrated weather picture and near-term trend forecasts. Eyes forward yields meaningful meteorological information not contained in coded observations to the 26 OWS and is an integral part of the METWATCH for Pope Field and operating locations. These changes include but are not limited to incorrect timing, location, or forecast values (e.g., ceiling too high or low). Upon detecting the change, WU personnel will notify the 26 OWS and begin the process to amend the forecast product.

2.5.1. The WU will use ORM to identify potential hazards and evaluate/analyze fine-scale and perishable weather products to support the assessment of potential hazardous weather conditions. The continuous interaction with the OWS will improve forecast accuracy, resource protection, situational awareness, and the mission execution process.

2.5.2. The WU will use ORM to de-conflict differences of meteorological opinion with the 26 OWS and determine if a valid hazard/forecast weather condition is agreed upon. If not, the weather technician will defer (final determination) to the 26 OWS and document the disagreement for the WOM to review.

2.5.3. Pope weather technicians will relay significant, time-sensitive meteorological information to the weather technicians conducting forecasting and METWATCH operations at the 26 OWS. These include the following:

2.5.3.1. Weather Observations: The WU will contact the 26 OWS when significant deviations in the weather exists from what the FMQ-19 is reporting or if weather conditions are rapidly changing. The WU will use ORM to determine if the FMQ-19 needs to be augmented because of a faulty sensor(s)/communication failure or a weather condition is beyond the capability to detect (e.g. fog bank).

2.5.3.2. WWAs: The WU will contact the 26 OWS when WWA criteria are occurring or forecast to occur and the 26 OWS has yet to issue the WWA. The WU will also contact the 26 OWS when criteria are forecast by the 26 OWS and are not expected to occur. The WU will use ORM to determine urgency of issuance by either the Pope WU or 26 OWS.

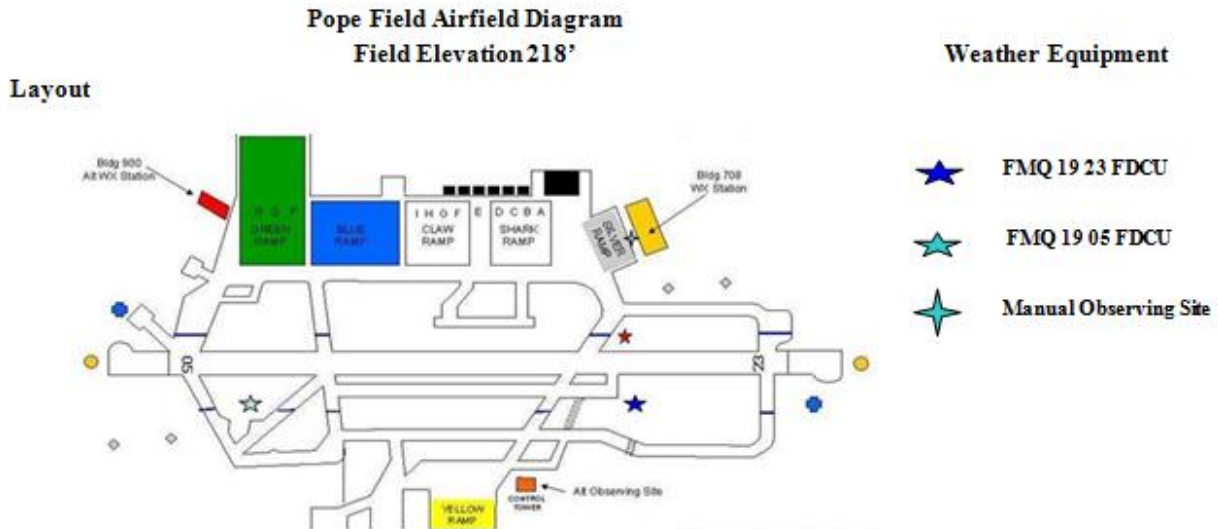
2.5.3.3. TAFs/MWPs update: The WU will contact the 26 OWS when local weather phenomena are expected that will affect OWS and WU products (e.g., TAFs and MWPs), but are not yet forecast. The WU will also contact the 26 OWS when significant forecast elements on OWS products are not expected to occur. Communication is the key to enable the 26 OWS weather technician to anticipate changes and subsequently adjust forecast products.

2.5.3.4. Other Weather Sources: The WU will pass any significant Pilot Weather Report (PIREPs), Airman's Meteorological Information Report (AIRMET), and Significant Meteorological Information (SIGMET) information to the 26 OWS for use in updating current weather charts and verification of forecasted conditions. The WU will report Unofficial Weather Reports from individuals who are not certified to take official observations (e.g. a pilot or law enforcement official) to the 26 OWS. The 26 OWS will actively monitor and apply PIREPs, AIRMET, SIGMET, and other perishable data sources received from the Pope WU as part of "eyes forward" process.

2.5.3.5. Severe Weather Action Team (SWAT): When the SWAT is convened, WU personnel will intensify monitoring of local and area weather to enhance the METWATCH process. WU technicians will pass on significant radar information (severe weather signatures) and any other severe weather reports from local sources to the 26 OWS. The WU will use ORM to determine resources and personnel required to perform this function.

2.6. Surface Observation Site. The official observation for Pope Field NC is taken by the FMQ-19 and unit sensors are located at each end of the runway. These locations are considered the official point of observation for automated observations on Pope Field. Runway 23, has the full suite of Field Data Collection Unit (FDCU) sensors which are located about 150 feet to the southeast of the runway in the infield grass area. Runway 05, also has FDCU unit sensors located about 150 feet to the southeast of the runway in the infield grass area. These units sit about 10 feet off of the ground. The FMQ-19 has no limitations due to its location on the airfield. The FMQ-19 does have limitations on what it can observe. The FMQ-19 cannot observe tornadoes, waterspouts, funnel clouds, volcanic ash, snow depth, hail, ice pellets, or smoke. When augmentation (supplementing or backup) is required to the FMQ-19, the manual observation point is located approximately 150 feet away from the southwest side of building 708. This puts the observation point on the concrete pavement next to the DV "Red Carpet". The field of view from this point is significantly limited due to buildings, hangars, and tree lines. This does not allow WU technicians to see the entire aerodrome. Specifically, the field of view is limited to less than 1 mile except south-southwest through west-southwest. High intensity lights limit the ability to accurately determine nighttime visibility, cloud amounts, and heights.

Figure 2.1. Pope Field Airfield Diagram.



2.7. Surface Weather Observations. The FMQ-19 takes the official observations and operates in Automated Mode (Auto Mode), meaning the system operates without any WU interaction and all observations are transmitted automatically. The FMQ-19 will be operated in full automated mode to provide the official METAR and SPECI observations (described below) except when being augmented. The FMQ-19 can automatically send/disseminate weather observations through the Joint Environmental Toolkit (JET). If required, the weather technician can augment and disseminate the observation using JET. The latest observations are also available via the WU Webpage whenever JET is operational. See Attachment 4 for decoding a weather observation.

2.7.1. **(METAR)** Routine Meteorological Observation Report. METAR observations are taken and disseminated every hour between 55 and 59 minutes after the hour. A METAR observation could also indicate that special weather criteria were met during the observing period. See Attachment 2 for special observing criteria. METAR observations are disseminated both locally and worldwide.

2.7.2. (SPECI) Special Observation. SPECI observations are taken whenever certain weather events, defined in AFMAN 15-111 and listed in Attachment 2, occur at Pope Field. These observations are disseminated both locally and worldwide.

2.7.3. **(LOCAL) Local Observation.** A LOCAL is an unscheduled observation reported to the nearest minute not meeting SPECI criteria. The only local taken by the Pope WU will be for backing up the FMQ-19 pressure sensor. LOCAL altimeter setting observations are taken at an interval not to exceed 35 minutes when there has been a change of 0.01 inch Hg (0.3 hPa) or more since the last reported ALSTG value. A METAR or SPECI taken within the established time interval will meet this requirement. All LOCAL altimeter setting reports will be prepared and disseminated as soon as possible after the relevant altimeter setting change is observed and is only transmitted to Pope Field units.

2.7.4. All METAR and SPECI observations produced by the FMQ-19 will include observation type, date/time, winds, visibility, present weather, sky condition, temperature,

dew point, altimeter setting, and remarks. Runway Visual Range (RVR) will automatically be included when visibility is one mile or less, and/or the RVR is 6000 ft or less.

2.7.5. If JET is inoperative, local weather observations will be disseminated by phone to ATC, CP, and Airfield Operations.

2.8. Augmentation of the FMQ-19. Augmentation is the process of having position-qualified weather technicians manually add or edit data to an observation generated by a properly sited FMQ-19. The two augmentation processes used are **supplementing** and **back-up**.

2.8.1. **Supplementing** is the method of manually providing meteorological information to an automated observation that is beyond the capabilities of the FMQ-19 to detect and/or report (e.g. tornado). The WU will also use ORM to supplement for a weather condition that is restricting surface visibility and it is beyond the capability of the FMQ-19 to detect (e.g. fog bank). WU technicians will supplement the observations and perform a Basic Weather Watch when the airfield is open and the weather conditions listed in [Table 2.1](#) are observed or forecasted to occur within 1 hour. WU technicians are required to log on to the FMQ-19 and be prepared to supplement whenever a watch or warning has been issued for tornadic activity. WU technicians are not required to supplement during airfield closure hours for any other listed criteria.

2.8.2. **Back-up** is the method for weather technicians to provide the same reporting capability (except for some automated remarks) as that provided by the FMQ-19 when the system/sensor(s) is not operational or unavailable due to sensor and/or communication failure. WU technicians will perform a Basic Weather Watch while backing up. If the weather technician determines that a weather condition (e.g. visibility) is significantly different than what the FMQ-19 is reporting, the WU technician will evaluate the situation to determine if the FMQ-19 is lagging behind the actual observed condition due to rapidly changing conditions or if the sensor is not operating correctly. Note: Sometimes in rapidly changing conditions, it takes the FMQ-19 time to catch up to the actual weather conditions, particularly visibility and ceiling because of the algorithms it uses (e.g. averages 10 minutes for visibility and 30 minutes for ceiling). The WU will use ORM to assess any risks. The FMQ-19 will be logged out if the sensor(s) is not operating correctly or if there is a communication failure.

2.8.2.1. Weather technicians will ensure supported ATC agencies are notified of all outages prior to contacting any maintenance agency.

2.8.2.2. Weather technicians will make every attempt to immediately log out the FMQ-19 except when immediate flight safety (e.g., in-flight emergency) warrants otherwise.

Table 2.1. Mandatory Supplement Parameters for Pope Field NC.

| |
|--|
| Tornado or Waterspout (+FC) |
| Funnel Cloud (FC) |
| Hail (GR) \geq 1/4 inch * |
| Volcanic Ash (VA) |
| Ice Pellets (IP) |
| Visibility < 1/4 mile (Only if Blizzard Warning is issued) |
| Snow Depth (Encode Snow Depth only during hours of operation and if heavy snow warning has |

been issued and snowfall is occurring)

Note: The immediate reporting of funnel clouds takes precedent over any other phenomena.

*** Note: Hail < 3/4 inch will only be supplemented for when the WU is open. (26 OWS hail default values used for hail \geq 1/4 inch but < 3/4).**

Supplementing Remarks. Remarks will be added when supplementing for the above criteria.

1. Tornadic Activity. Tornado(s), waterspouts, or funnel cloud(s) will be reported in a METAR/SPECI whenever they are observed to begin (first seen), are in progress, or disappear (end). A SPECI will be generated with the beginning or ending of a tornado, waterspout, or funnel cloud. The standard contraction +FC for tornado or waterspout is entered into the PRESENT WX field. In the case of a Funnel Cloud, FC is the contraction used. Tornadic activity will be encoded as the first remark after the "RMK" entry. **Encoded as**

"TORNADO_B/E(hh)mm_LOC/DIR(Distance if known)_MOV(If known)" Example:

TORNADO B13 1 SW MOV NE.

NOTE: (hh)mm Only the minutes are required if the hour can be inferred from the report time.

2. Hail (GR) will be reported in a METAR/SPECI when **hail \geq 1/4 inch** begins, is in progress, or ends. When hail is supplemented into the body of the report, a remark should be included to report the beginning or ending times. However, normally the SPECI time will be the beginning or ending time of the hail and no remark is needed. Hail begins at the time it is first observed and ends when it is no longer falling. No intensity is assigned to hail. Depth of hail on the ground is not reported in the METAR/SPECI report. The WU technician will report the hailstone size in remarks. **Example:** **"GR_3/4"**

3. Volcanic Ash (VA) will be reported whenever it is observed. VA is always encoded in the body of the report regardless of the visibility and no remarks are required. No intensity is assigned to volcanic ash.

2.9. Pilot-to-METRO Service (PMSV) Support. Weather information is available via PMSV on frequency 344.6 MHz. There will be a minimum of one radio check each day to verify the PMSV radio is in full service. The WU will monitor PMSV traffic during duty hours for aircraft contacts. For aircraft outside the range of our PMSV or during extended outages, Andrews AFB will monitor the system. The 26 OWS can provide PMSV support as required through a phone patch to the CP (DSN 424-9000, Comm 910-394-9000).

2.9.1. In the event of a PMSV outage, the WU will notify the following agencies:

2.9.1.1. Air Traffic Control and Landing Systems (ATCALS), DSN 424-2505, Comm 910-394-2505.

2.9.1.2. Andrews AFB Weather at DSN 858-2840 to monitor the PMSV.

2.9.1.3. ATC via hotline.

2.9.1.4. CP via hotline (Can initiate a phone patch as required).

2.9.1.5. Airfield Operations, DSN 424-6508, Comm 910-394-6508.

2.9.1.6. 26 OWS, DSN 331-2639.

2.9.2. For Long Term outage (Over 12 hours): The Pope WU will contact Airfield Operations and have them complete the following:

2.9.2.1. Local Safety Notice to Airmen (NOTAM). (The decoded message will read: "Frequency 344.6 Pilot-to-Metro service not available".)

2.9.2.2. NOTAM Example:

NOTAM

CODE: QXXXX 344.6 PMSV

2.9.3. Brief aircrews of outage. Provide alternate contact options.

2.9.4. Upon resolution of the outage perform a radio check to verify operability and document on PMSV log.

2.9.5. Notify all affected units when the PMSV equipment is back in operation (ATC, CP, etc.).

Chapter 3

MISSION INFORMATION

3.1. General. As with most Air Force bases, Pope Field has many different organizations, weapons systems, and missions. All systems, missions, and aircrews are limited by some weather parameters. This section will identify local weapons systems, the most common missions and operating areas, and weather sensitivities associated with the organization, weapons systems, missions, and aircrews.

3.2. Supported Organization/Missions/Requirements. The 440 OSS/OSAW provides weather support to the following organizations (and their associated units) with the accompanying missions and requirements:

Table 3.1. Pope Field Agency/Missions/Requirement Listing.

| Organization | Mission | Requirements |
|--|---|---|
| 440th Airlift Wing | Provide the essential airlift capacity to the armed forces and to conduct humanitarian airlift missions anywhere they are needed in the world. | See Tables 3.2.-3.7. All watches/warnings, see Chapter 7. |
| 43rd Airlift Group | To execute rapid outload, enroute support, and mobility operations-anytime, anywhere. | See Tables 3.2.-3.7. All watches/warnings, see Chapter 7. |
| USA Parachute Demonstration Team (Golden Knights) | To perform live aerial demonstrations for the public and in promotion of the Army's public relations and recruitment efforts. To compete in national and international parachuting competitions. To test and evaluate new parachuting equipment and techniques for improved operation and safety. | See Tables 3.2.-3.7. All watches/warnings, see Chapter 7. |
| 427th Special Operations Squadron | Train Special Forces paratroopers in static line and High Altitude, Low Open parachute jumps; train airfield seizures. | See Tables 3.2.-3.7. All watches/warnings, see Chapter 7. |
| 228th Aviation Regiment | Provides all fixed wing transportation for the 18th Airborne Corps and all other Army units. | See Tables 3.2.-3.7. All watches/warnings, see Chapter 7. |
| | | |

3.3. Geographic Area of Responsibility. The WU provides mission-tailored weather support for flying areas used by units assigned or attached to Pope Field. The areas are further defined in 440 AWI 11-250, *Local Flying Operating Instructions*. Occasionally, the local Ft Bragg ranges will be used for training. The WU will support these missions by exploiting weather products produced by the 18 WS.

3.4. 440th Airlift Wing Primary (C-130). C-130 aircraft have specified criteria for take-off and landing procedures. It is imperative that accurate and timely weather conditions are briefed (if required) when the following conditions are occurring:

Table 3.2. Ceiling, Visibility, and/or Weather Hazards that impact launch and recovery of aircraft.

| Favorable | Marginal | Unfavorable |
|--|---|---|
| Cig \geq 1500ft and/or Vis \geq 3NM | Cig < 1500ft but \geq 200ft, and/or Vis < 3NM but \geq 1/2NM | Cig < 200ft and/or Vis < 1/2NM |
| None and/or LGT Turbulence None and/or LGT Icing No TSTMs (on station) | MDT Turbulence MDT Icing | SVR Turbulence SVR Icing TSTMs (on station) |

Table 3.3. Other Restriction Considerations.

| | |
|---------------------------------------|--|
| Cig < 1500ft and/or Vis < 3NM | Crosswind or gust component exceeds 15 knots |
| Air-to-Surface Weapon Restriction | Formation Takeoffs Restrictions |
| Formation Join-Up/Re-Join Restriction | Formation Landing Restrictions |
| Visual Low-Level training Restriction | |

3.5. Alternate Landing Sites. If the ceiling and/or visibility is observed or forecasted to decrease to < 2,000 ft and/or < 3NM, an alternate landing site, with ceilings \geq 2,000ft and/or visibility \geq 3NM, is required. These sites may be used as alternate landing sites: **KCHS, KSSC, KGSB, and KLFI.**

3.6. Weather Sensitivities for all Pope Field Supported Aircraft (Green Cells=Go, Yellow Cells=Marginal, Red Cells=No-Go)

Table 3.4. Weather Sensitivities.

| AIRCRAFT | ICING | TURBULENCE |
|----------|-------|------------|
|----------|-------|------------|

| TYPE | LGT | MDT | SVR | LGT | LGT-MDT | MDT | SVR |
|--------------------------------------|---------------|----------|-------------------|-------------------|------------|--------------------------|----------|
| 440 AW | | | | | | | |
| C-130 | | OBS | FCST/OBS | | | FCST/OBS (restricted) | FCST/OBS |
| 427th SOS | | | | | | | |
| CN 235 | | | FCST/OBS | | | | FCST/OBS |
| DHC-6 | | OBS | FCST/OBS | | | | FCST/OBS |
| PC-6 | FCST/OBS | FCST/OBS | FCST/OBS | | | | FCST/OBS |
| C-208 | | | FCST/OBS | | | | FCST/OBS |
| UV-20 | | | FCST/OBS | | | | FCST/OBS |
| GOLDEN KNIGHTS | | | | | | | |
| DHC-6 | | OBS | FCST/OBS | | | | FCST/OBS |
| C-31 | | | FCST/OBS | | | | FCST/OBS |
| 228 th AVIATION BATTALION | | | | | | | |
| C-12 | | | FCST/OBS | | | | FCST/OBS |
| UC-35 | | | FCST/OBS | | | | FCST/OBS |
| JA/ATT | | | | | | | |
| C-17 | | OBS | FCST/OBS | | | | FCST/OBS |
| C-5 | | | FCST/OBS | | | | FCST/OBS |
| AIRCRAFT TYPE | PRECIPITATION | | TSTM AVOIDANCE | | | X WIND LIMITS (KTS) | |
| | FZ DRIZ | FZ RA | FL/DIST (nm) | FL/DIST (nm) | DRY RWY | WR// | |
| 440 AW | | | | | | | |
| C-130 | | NO | BELOW 230/10nm | ABOVE 230/20nm | 35 | 25 | |
| 427th SOS | | | | | | | |
| CN 235 | | | AVOID 10 NM | AVOID 10 NM | 30 | | |
| DHC-6 | VISIBLE | VISIBLE | AVOID | AVOID | 20 | | |
| PC-6 | NO | NO | AVOID 10 NM | AVOID 10 NM | 20 | | |
| C-208 | | | AVOID 10 NM | AVOID 10 NM | 20 | | |
| UV-20 | | | AVOID 10 NM | AVOID 10 NM | 25 | | |
| GOLDEN KNIGHTS | | | | | | | |

| | | | | | |
|--|---|----------------|---|-------------------------------|--|
| DHC-6 | VISIBLE | VISIBLE | AVOID | AVOID | 20 |
| C-31 | VISIBLE | VISIBLE | AVOID | AVOID | 30 |
| 228TH AVIATION BATTALION | | | | | |
| C-12 | VISIBLE *Requires de-icing | VISIBLE | Unit Unique Below FL230 AVOID 20NM | Above FL230 AVOID 20NM | 25 |
| UC-35 | VISIBLE *Requires de-icing | VISIBLE | Unit Unique Below FL230 AVOID 20NM | Above FL230 AVOID 20NM | A Model 20 B Model 30 |
| JA/ATT | | | | | |
| C-17 | | NO | BELOW 230/10nm | ABOVE 230/20nm | 30 |
| C-5 | | NO | BELOW 230/10nm | ABOVE 230/20nm | 27 19 |

3.7. For All Airframe-Specific Weather Limitations. See AFI 11-2 series (aircraft type) for airframe-specific weather limitations. Also refer to AFI 11-202V3, *General Flight Rules* for further guidance on airframe limitations.

3.8. Weather Related Impacts to Pope Field Supported Organizations/Units. Increased awareness of weather related impacts is necessary for proper tailored weather support. **Table 3.5** provides weather related impacts to Pope's supported units and actions they take:

Table 3.5. Mission Critical Weather Related Impacts/Actions.

| Weather Phenomena | Lead Time | Impact | Action |
|---|------------------|---|--|
| Tornado | 15 Min | Immediate threat of catastrophic damage to personnel and property | <i>Seek shelter; hangar or divert aircraft</i> |
| Severe Thunderstorm (Damaging Winds \geq 50 Knots and/or Hail \geq 3/4 Inch) | 1 Hour | Immediate threat to exposed personnel High risk of damage to facilities and exposed aircraft and equipment | <i>Seek shelter; hangar or divert aircraft</i> |
| Moderate Thunderstorm (High Winds \geq 35 Knots but $<$ 50 Knots and /or Large Hail \geq 1/4 Inch to $<$ 3/4 Inch) | 1 Hour | Increased risk to exposed personnel Increased risk of damage to unsecured property | <i>Cease unnecessary flying; secure or hangar aircraft; secure light objects outside</i> |

| | | | |
|--|--------|---|--|
| | | Increased risk to flightline activities and damage to exposed aircraft or vehicles | |
| Damaging Winds (Surface Winds ≥ 50 Knots not associated with thunderstorms) | 1 Hour | Immediate threat to exposed personnel Increased risk of damage to facilities and equipment | <i>Cease unnecessary flying; secure or hangar aircraft; secure light objects outside</i> |
| Strong Wind (Surface Winds ≥ 35 Knots but < 50 Knots not associated with thunderstorms) | 1 Hour | Increased risk to exposed personnel Increased risk of damage to unsecured property Increased risk to flightline activities and damage to exposed aircraft or vehicles | <i>Cease unnecessary flying; secure or hangar aircraft; secure light objects outside</i> |
| Freezing Precipitation (Any Type/Intensity) | 1 Hour | Range of unsafe to significant impacts dependent on precipitation type and intensity | <i>Cease flying; hangar or protect aircraft</i> |
| Heavy Snow (≥ 2 Inches in ≤ 12 Hours) | 1 Hour | Disrupts personnel movement or flight line activities Aircraft landing and takeoff/base roads affected | <i>Implement snow removal</i> |
| Heavy Rain (≥ 2 Inches in ≤ 12 Hours) | 1 Hour | Increased threat of flash flooding or systemic flooding posing credible threat to unprotected resources and personnel Disrupts flightline | <i>Caution to all personnel and movement</i> |

| | | | |
|--|------------------------|--|---|
| | | activities Imposes increased risk on personnel movement | |
| Blizzard (Winds (sustained or gust) ≥ 30 Knots, surface vis $\leq 1/4$ SM, considerable falling and/or blowing snow, for a duration ≥ 3 Hours) (All criteria must be met) | 1 Hour | Imposes significant risk to personnel movement Significant risk to maneuver or flight line activities | <i>Cease flying; hangar or protect aircraft</i> |
| Lightning w/in 5 NM of Pope Field | 30 Min Observed | Immediate threat to exposed personnel Delay operations | <i>Be aware of lightning potential</i> <i>Cease flight-line work. Clear pool</i> |
| Lightning w/in 10 NM of Pope Field | Observed | Flight hazard | <i>Caution (C-130)</i> |
| Surface Winds ≥ 20 Knots | Observed | Personnel hazard | <i>Cease wing walking on large aircraft</i> |
| Sustained Surface Winds ≥ 15 Knots | Observed | Personnel hazard | <i>Stop C-130 fuel tank maintenance</i> |
| Crosswind ≥ 15 kts | Observed | Flight hazard | <i>C-130s need to watch aircraft weight</i> |
| Moderate or Greater Turbulence (CAT II/Restricted C-130) and Moderate or Greater Icing | Observed | Flight hazard | <i>C-130s won't fly with observed severe icing/turbulence</i> |

| | | | |
|--------------------------------|----------|---------------------------|---|
| Ceiling/visibility < 200 / 1/2 | Observed | Airfield minimums | <i>Runway closed for takeoff and landings</i> |
| Low Level Wind Shear | Observed | Flight Hazards | <i>Caution</i> |
| Winds 13kts | N/A | Limit for personnel jumps | <i>Monitor winds</i> |
| Winds 17kts | N/A | Limit for HALO jumps | <i>Monitor winds</i> |
| | | | |

3.9. Critical Weather Factors. The following are critical weather factors that can enhance or degrade missions, systems, and personnel:

3.9.1. Low Visibility – Low visibility can impair or stop airborne and ground operations.

3.9.2. Surface Winds – Strong winds limit surface and airborne operations. Winds in excess of 35 knots can cause personal injury, damage material and structures, create false radar returns, and reduce visibility. Surface winds affect airborne operations by limiting takeoff and landings.

3.9.3. Precipitation – Precipitation is significant because it affects visibility, personnel effectiveness, and a wide variety of military equipment. In addition, both rain and snow can drastically reduce personnel effectiveness by limiting visibility, causing discomfort, increasing fatigue, and creating other physical and psychological problems.

3.9.4. Cloud Cover – The type and amount of cloud cover and the altitude of cloud bases and tops influence aviation operations. Cloud cover affects ground operations by reducing illumination and visibility, or in some instances, by enhancing the effects of artificial light.

3.9.5. Temperature and Humidity – Together, these elements have a direct impact on personnel and vehicle performance. Excessively high temperatures cause heat related injuries to personnel and vehicle engine wear that leads to equipment failure. Very low temperatures increase cold weather injuries, cause damage to Tanker, Airlift, and Drop Zone vehicle cooling systems and engines, decrease the effectiveness of vehicle lubrication, and create excessive logistics requirements.

3.10. Airdrops. Wind direction is reported in magnetic degrees and wind speed in knots. The direction reported is the direction the wind is coming from. Drop zone (DZ) wind information is critical to airdrop accuracy and safety. It is imperative that accurate and timely wind data be transmitted to the aircrew. This also includes any unusual observations of wind shear or local

phenomena that could affect wind direction, speed or restrictions to visibility. See the following tables:

Table 3.6. Surface Wind Limits for USAF Equipment Airdrops.

| TYPE CDS/EQUIPMENT DROP | SURFACE WIND LIMITS (KNOTS) |
|--|---|
| AF Equipment | 17 |
| AF CDS or LV-LCADS using G-12 parachutes | 13 |
| AF CDS using G-13/14 parachutes | 20 |
| HAARS, HV CDS, HSLADS, OR HV-LCADS | No Restriction |
| AF Training Bundles (SATB) | 25 |
| RAMZ/ARC/CRRC Bundles | 25 |
| Non-AF Personnel | At the discretion of airborne unit DZSO |

Table 3.7. Surface Wind Limits for USAF Personnel Airdrops.

| TYPE PERSONNEL DROP | | SURFACE WIND LIMITS (KNOTS) | |
|--|----------------------------------|---|--|
| AF Static Line (Land) / (Intentional Tree) | | 13 / 17 | |
| AF Static Line (Water) | | 25 | |
| AF MFF (Land) / (Intentional Tree) | | 18 / 22 | |
| AF MFF (Water) | | 25 | |
| AF Tandem | | 18 | |
| Non-AF Personnel | | At the discretion of airborne unit DZSO | |
| Favorable | | Unfavorable | |
| (Static Line) Surface Wind < 13kts | | (Static Line) Surface Wind ≥ 13kts | |
| (Military Free Fall – HALO) Surface Wind < 17kts | | (Military Free Fall – HALO) Surface Wind ≥ 17kts | |
| Ceiling impacts on local airdrop operations. *Depends on the Drop Altitude: Ceilings have to be 500ft above Drop Altitude. | | | |
| Favorable | Marginal | Unfavorable | |
| Cig ≥ 500ft above Drop Altitude | Cig < 500 above Drop Altitude | Cig at/or below Drop Altitude | |

3.11. Space Weather.

3.11.1. This section contains some brief information regarding space weather limitations, alerts and warnings, and products available to Pope personnel.

3.11.2. Limitations. Like terrestrial weather, there are numerous factors that influence space weather. One of the biggest limitations we have in identifying and forecasting space weather is a lack of sensors. Events can generally be forecast for but, given the speed of solar wind and light, our ability to provide lead-times for significant space events is extremely limited.

3.11.3. Space Weather Alerts and Warnings. Pope's mission has a wide-variety of parameters possibly affected by various space weather conditions (HF and UHF communication, radar, GPS targeting, etc). Broad coverage CONUS-based space weather products (graphics) are available at this link: https://ows.barksdale.af.mil/index.cfm?fuseaction=space_weather and will be used to update the Space Weather portion (Freq/GPS/Rad) of Flight Weather Briefs. GPS Targeting Errors will be monitored for specific missions upon request (see paragraph 3.11.4.1). Space Weather analysis, alerts, forecasts and warnings are listed at the following link: <https://weather.af.mil/confluence/display/AFWWEBSTBT/Space+Weather+Main+Page> Additionally, Space Weather Impacts will be reported through the appropriate link on this site. Bulletins are also available through AFW-WEBS at: <https://weather.af.mil/confluence/display/AFWWEBSTBT/Space+Bulletins> A sample of the daily discussion is provided in **Figure 3.1** See the links above for current Space Environment Discussions, including potential impacts to AF/Army Operations.

Figure 3.1. Sample Space Environment Discussion.

| UNCLASSIFIED | |
|---|---|
| SPACE ENVIRONMENT DISCUSSION | |
| VT: 09/12Z | |
| Space Weather Events/Impacts Summary | Potential Impacts to DoD Operations |
| <p>Solar Activity: Observed GREEN. Forecast GREEN 09 – 12 Jan. Flare probabilities: M: 05% X: 01%</p> <p>HF Comm: Observed GREEN. Forecast GREEN 09 – 12 Jan.</p> <p>Geomagnetic: Observed GREEN. Forecast GREEN 09 – 12 Jan.</p> <p>Satellite Operations/Health: Observed GREEN. Forecast GREEN 09 – 12 Jan.</p> <p>Radar Interference/False Returns: Observed GREEN. Forecast GREEN 09 – 12 Jan.</p> <p>Space Object Tracking/Satellite Drag: Observed GREEN. Forecast GREEN 09 – 12 Jan.</p> <p>Charged Particle Environment: Observed GREEN. Forecast GREEN 09 – 12 Jan.</p> <p>High Altitude Flight: Observed GREEN. Forecast GREEN 09 – 12 Jan.</p> | <p>HF Comm (when YELLOW or RED): temporary degraded or total loss of HF radio communications.</p> <p>UHF SATCOM (when YELLOW or RED): temporary degraded or total loss of UHF radio communications.</p> <p>Satellite Operations/Health (when YELLOW or RED): increased likelihood of spacecraft anomalies; degradation of spacecraft components due to radiation interference to communication satellite circuits.</p> <p>Space Object Tracking/Satellite Drag (when YELLOW or RED): increased likelihood for space object tracking loss; increased drag on low earth orbiting spacecraft.</p> <p>High Altitude Flight (when YELLOW or RED): increase in harmful radiation dosage to personnel in high altitude operations.</p> <p>Radar Interference/False Returns: (when YELLOW or RED): increased interference or false returns to sunward and/or poleward looking radars.</p> |
| <p>This slide provides a generalized situation awareness of past and future space environment impacts to war-fighters and weapon systems. The severity of the impacts due to the space environment may be more or less than indicated by the color coded assessment in a particular area. The impact variability is dependent on a variety of factors including, but not limited to, system location, geometry, and operating frequency. Please contact the 2 WS Space Weather Forecaster at DSN 272-8087 or 272-4317 (Commercial 402-232-8087 or 402-232-4317) to arrange mission-specific support or to report conditions experienced by your system that may be related to space weather disturbances.</p> | |
| UNCLASSIFIED | |

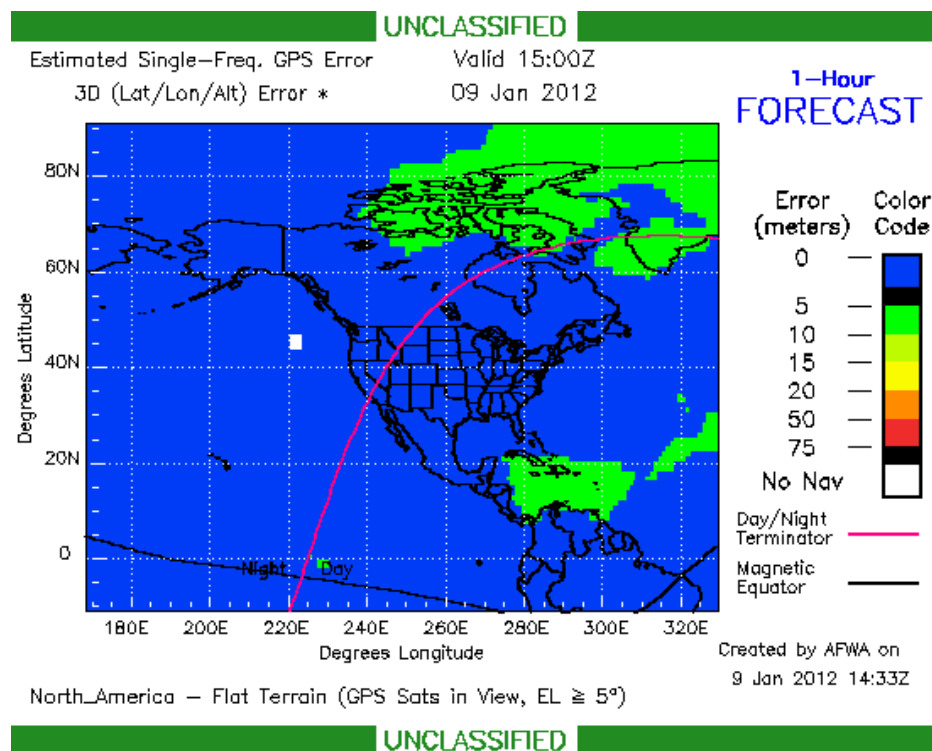
3.11.4. Products. Numerous space weather products are available from AFW-WEBS (see links above). Most Space Weather products from the strategic center are “now-casts” and/or very short-term forecasts (6-hourly periods), so the duty forecaster will check websites for updated products according to the Daily Forecast Checklist and update Flight Weather Briefs as needed. For more information concerning these products please use the following AFW-WEBS link:

<https://weather.af.mil/confluence/display/AFWWEBSTBT/Space+Weather+Main+Page>

GPS products are primarily “Now-casts” and/or <1 hourly forecast. Duty forecasters will monitor these products. See

<https://weather.af.mil/confluence/display/AFWWEBSTBT/Regional+GPS+Maps> for further details (select location and type of terrain).

Figure 3.2. Sample GPS Error Forecast.



Chapter 4

MISSION SERVICES

4.1. General. Mission services are those actions directly related to completing each supported unit's daily mission(s). MWPs are used to accomplish these tasks. MWPs are tailored to individual supported units requirements and may be anything from a web-based FWB to a Change-of-Command weather forecast. Any event, both flying and non-flying, that will be affected by weather normally requires some sort of MWP.

4.2. Operational Hours. Mission Services mirror the Airfield Services operating hours which are from 0500-2300L Monday through Friday, except federal holidays, and when the 440 AW has their monthly UTA. If missions dictate, Mission Services may be provided beyond the normal operating hours with advance notification. Normally, any briefings required between 2300L-0500L and over weekends or holidays will be prepared by the 26 OWS FWB support section and faxed to the supported unit. Briefings may also be done by the 618 AOC/XOW, Tanker Airlift Control Center (TACC) via the Global Decision Support Services (GDSS2).

4.3. Mission Integration/Liaison. The Pope WU will gain an in-depth understanding of supported mission platforms, equipment, and systems capabilities/sensitivities as well as mission processes to be able to reliably inject timely, accurate, and relevant environmental information to optimize mission execution. Supported units mission weather sensitivities will be reviewed and updated at least yearly.

4.3.1. To ensure maximum mission support, WU personnel will establish and actively maintain relationships with supported units.

4.3.2. WU personnel will be task organized/aligned to each flying organization on Pope Field to act as a liaison to support decision-makers, weapons systems, and missions. They will act as a single point of contact for any issues affecting their assigned flying organization. This will allow continuity of operations between the WU and flying organizations to be able to quickly adapt to process and/or mission changes.

4.4. Terminal Aerodrome Forecasts (TAFs). Pope Field TAFs will be produced and disseminated by the 26 OWS in accordance with AFMAN 15-124, AFI 15-128, AFMAN 15-129, and 440 OSS/OSAW and 26 OWS Installation Data Page. Forecast specification and amendment criteria are listed in Attachment 3. TAFs are valid for 30 hours, apply to the area within a 5 NM radius of the Pope airfield complex, and will be issued every 8 hours. The Pope WU and 26 OWS will collaborate prior to TAF dissemination and formally document the WU's inputs. See Attachment 4 for decoding a TAF.

4.5. Mission Weather Products (MWPs). MWPs are essentially mission-specific forecasts that are developed using a process outlined in AFMAN 15-129, Volume 2, *Air and Space Weather Operations – Exploitation* and may be provided by a number of methods (e.g., GDSS2, verbally, person-to-person, posted on local Webpage, etc). During this process, the WU will evaluate and tailor products created by the 26 OWS and strategic weather centers, as well as information supplied by local units (e.g. flying schedule) and agencies and apply to specific missions by integrating their knowledge of tactics and environmental sensitivities for all aircraft operating at Pope Field. WU technicians will also integrate their understanding of the current

aerospace weather situation, perishable data (e.g., observed data, radar, satellite, surface and upper air observations, pilot reports, mission debriefings, etc.), and their familiarity with local weather effects. The end result is a product designed to provide timely, accurate, and relevant weather intelligence to various supported units by whatever means proves most effective. MWP's must be horizontally consistent with (but not necessarily mirror) products issued by the 26 OWS. However, during rapidly changing conditions, emergencies, or when conditions threaten resource protection, the WU will update MWP's as necessary to accurately reflect the current weather conditions and back-brief the 26 OWS when time permits.

4.5.1. Flight Weather Briefings (DD 175-1, Verbal). The Pope Field WU will provide verbal or traditional DD Form 175-1 to aircrews as requested following the flight's duty priorities listed in [Table 1.1](#). Briefings created by the WU will be conducted at building 708, via fax, e-mail, or by phone. All 175-1 flight weather packages/briefings prepared and briefed by the Pope WU will be completed IAW AFMAN 15-129, Volume 2, Attachment 2. The Pope WU must have at least 2 hours notice to complete the request. Call DSN 424-6543/6544, Comm 910-394-6543/6544.

4.5.2. The Pope WU is the primary source of tailored weather information for Pope Field supported units. When mission activities occur away from Pope Field, the WU will retain responsibility (if required) of ensuring our units receive mission execution weather information.

4.5.2.1. When the capability exists, the WU will provide MWP's to Pope Field supported units.

4.5.2.2. If the WU cannot provide MWP's to supported units missions operating from a transient or staged location, they will arrange support by any of the following means:

4.5.2.2.1. Request assistance from the WU at the transient or staged location.

4.5.2.2.2. If follow-on mission data is not known at execution from Pope Field, provide the servicing OWS web site and telephone information to the departing aircrew for the OWS servicing the airfield they will be working from.

4.5.3. 618 AOC/XOW (TACC) MWP Support. The bulk of flying operations at Pope Field are supported in a weather capacity by TACC. All AMC and AMC-gained ARC flying operations are to obtain all weather services through 618 AOC/XOW (TACC) using GDSS2 for both Integrated Flight Management (IFM) and non-IFM missions.

4.5.3.1. Aircrews are to request weather packages/briefings via GDSS2 NLT 2 hours prior to takeoff. *If a weather package/briefing is requested less than 2 hours prior to take off, aircrews are to call TACC at DSN 779-0351/0353, or Comm. 618-229-0351/0353 to ensure the mission/sortie is identified in order to complete the weather package/briefing.

4.5.3.2. Aircrews are to update GDSS2 as soon as possible with changes to missions in order for TACC to provide an updated weather package/briefing.

4.5.3.3. Aircrews are to contact TACC if there is a change to the mission/sortie after the weather package/briefing has been posted or published, and/or the need for weather updates during mission execution.

4.5.3.4. Any new package/briefing or an update to an existing package/briefing is to be accomplished by TACC.

4.5.3.5. Use of the Pope WU for TACC controlled missions. The Pope WU will shadow weather packages in GDSS2 and backup TACC in the event of a communication failure or high operational tempo by TACC. If TACC is unable to provide a weather package/briefing and/or update, aircrews may request a weather package/briefing and/or update from the Pope WU provided workload and duty priority allow for supporting this task and the Pope WU is open.

4.5.3.5.1. Aircrews may obtain updated take-off weather from the Pope WU as needed. The Pope WU will notify TACC DSN 779-0351/0353, or Comm. 618-229-0351/0353 if the takeoff update includes any of the weather criteria listed below.

Table 4.1. Weather Criteria Requiring Notification to TACC.

| |
|---|
| Ceiling/visibility \leq to 200ft/1/2SM |
| Dry runway crosswind 25kts or greater |
| Wet runway crosswind 20kts or greater |
| Forecast LLWS for KC-10 operations |
| Observed LLWS for all AMC aircraft |
| Predominant thunderstorms on station |
| Freezing precipitation |
| Moderate (or greater severity) turbulence/icing |
| Forecast or observed volcanic ash on takeoff |

4.5.3.5.2. The Pope WU will subscribe to and monitor Weather Threat Assessment (WTA) notifications for locally assigned missions. This will allow the WU to provide updates to aircrews via PMSV, phone-patch etc. when requested. **NOTE:** Coordinate with TACC if weather deviates from the published WTA.

4.5.3.5.3. The Pope WU will consult/coordinate with TACC, as required, to resolve any aircrew concerns/issues and facilitate discussions between aircrew members and TACC to elaborate on weather impact and/or answer aircrew questions. The TACC is the final arbiter for weather issues involving IFM and non-IFM sorties/missions.

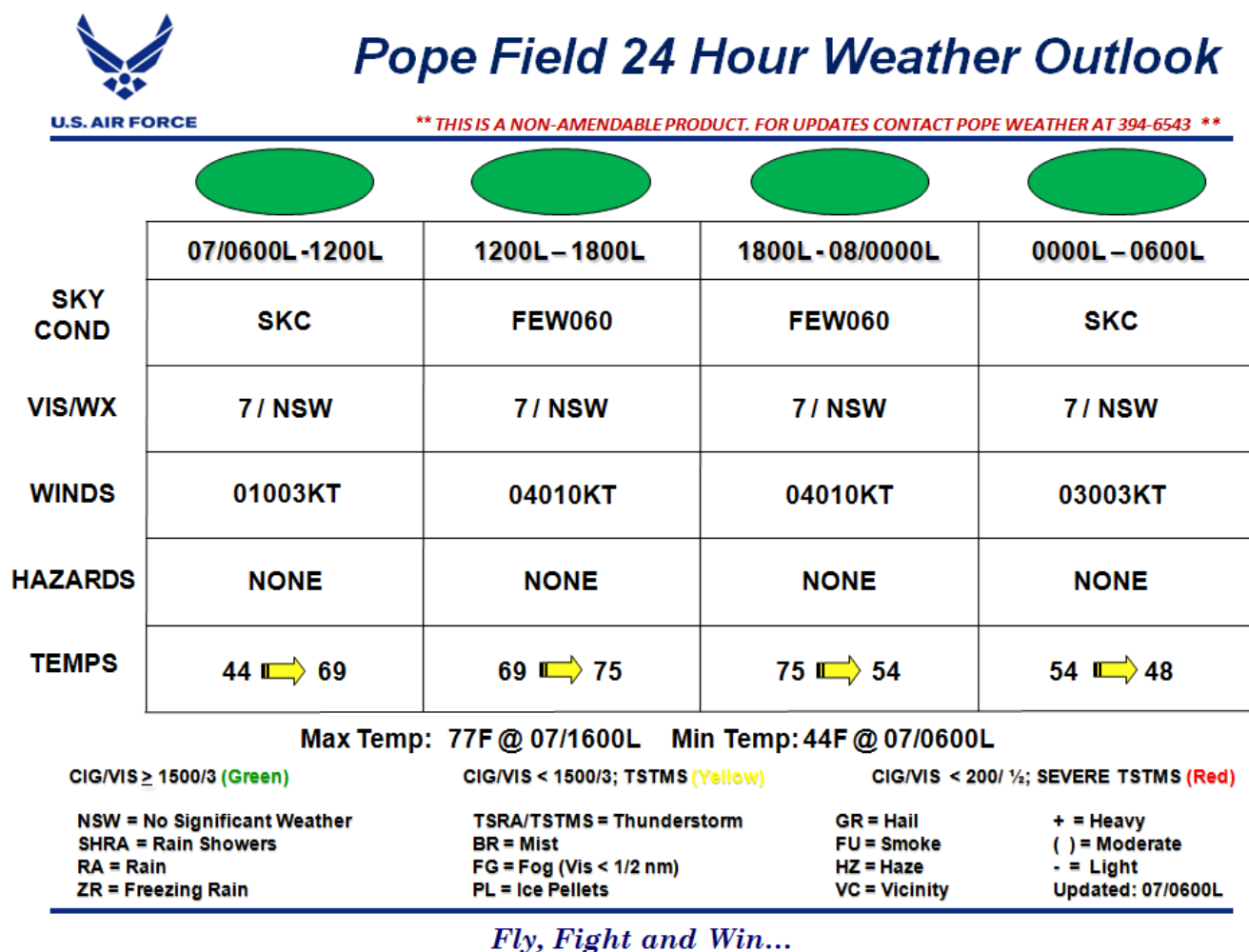
4.5.4. Transient Aircraft/Aircrews MWP Support. Transient aircrews can receive FWBs from GDSS2, home base WU, Pope WU, or the 26 OWS. Transient aircraft/aircrews are to first utilize either GDSS2 or their home base WU for flight weather packages/briefings and/or updates. In the event transient aircraft/aircrews cannot access GDSS2 or their home base WU is unable to provide a flight weather package/briefing and/or update, aircrews may request a flight weather package/briefing and/or update from the Pope WU provided workload and duty priority allow for supporting this task, and the WU is open.

4.5.5. 26 OWS MWP Support. In the event the Pope WU is unable to provide a flight weather package/briefing and/or update due to workload, duty tasks or being closed, aircrews

are to contact the 26 OWS FWB Support section through the 26 OWS flight brief scheduling system, accessible through the 26 OWS web site: <https://ows.barksdale.af.mil/>, or by calling the weather briefer at DSN: 331-2651 or Comm.318-529-2651, FAX: DSN 331-2609. Aircrews are encouraged to request the flight weather package/briefing at least 2-hours prior to brief time. Aircrews can either have the 26 OWS email or fax the flight weather package/briefing to them.

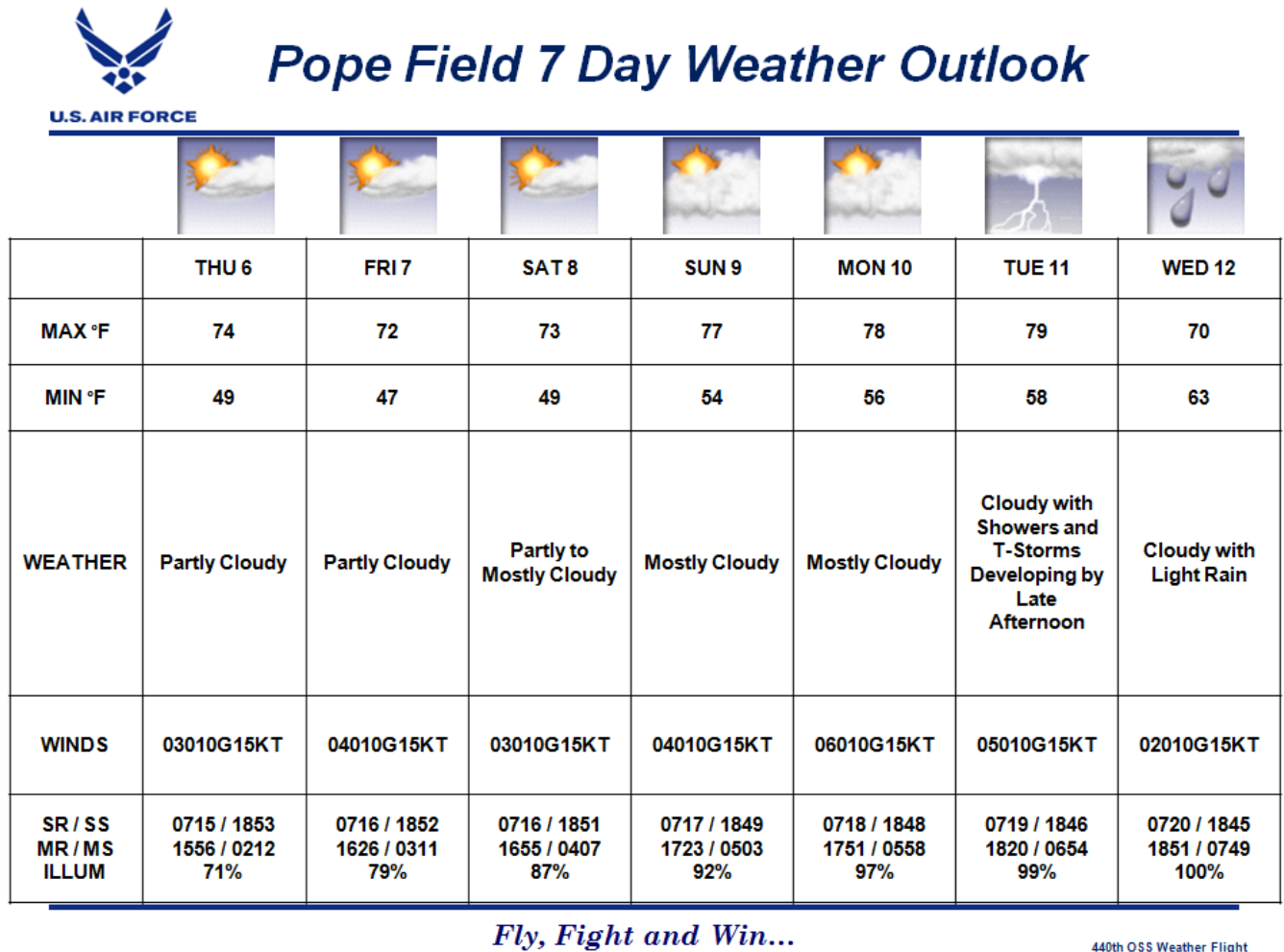
4.5.6. Pope Field 24-Hour Weather Outlook. This is a non-amendable operational product produced daily and uploaded by 0700L to the Pope WU Webpage at <https://cs3.eis.af.mil/sites/21228/SitePages/Weather%20Home.aspx>. This product will include Sky Condition, Visibility/Weather, Winds, Hazards, and Temperature for 24 hours out. Forecast conditions are for each 6 hour periods and the bubbles indicate Green, Yellow, Red based on mission-limiting weather located on the bottom of the product. See **Figure 4.1** for an example of the product. For weather updates contact the WU at DSN: 424-6543/6544 or Comm: 910-394-6543/6544. This product will be sent to the CP daily Monday – Friday and posted to the 43 AG Daily Standup Briefing (when requested) and the 440 AW Staff Meeting Slides on Monday.

Figure 4.1. 24-Hour Weather Outlook Slide.



4.5.7. Pope Field 7-Day Weather Outlook. This is a non-operational long range product produced daily and uploaded by 0700L to the Pope WU Webpage at <https://cs3.eis.af.mil/sites/21228/SitePages/Weather%20Home.aspx>. This product will include Maximum and Minimum Temperatures, Weather Conditions, Winds, and Solar/Lunar data for 7 days out. See [Figure 4.2](#) for an example of the product. This product will be sent to the CP daily Monday – Friday and posted to the 43 AG Daily Standup Briefing (when requested) and the 440 AW Staff Meeting Slides on Monday.

Figure 4.2. 7-Day Weather Outlook Slide.



4.5.8. Pope Fitness Test (PFT) Tailored Weather Slide. This is a product produced daily and uploaded by 0700L to the Pope WU webpage at <https://cs3.eis.af.mil/sites/21228/SitePages/Weather%20Home.aspx> where there is a button labeled “PT TEST WX”. This product is “For Planning Purposes Only” and will provide a 48-hour planning forecast to help PTLs determine when weather conditions may be most favorable to do PT testing. Weather thresholds for winds and temperatures is based on AFI 36-2905. When the wind or temperature for a particular hour is not favorable it will indicate “Yes” (Red). If the wind or temperature for a particular hour is favorable it will indicate “No” (Green).

| Day-Month Hour (local) | 13-Feb | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 16-Feb | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
|---------------------------|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|-----|
| Temperature (°F) | 58 | 59 | 60 | 61 | 59 | 56 | 53 | 49 | 46 | 44 | 43 | 42 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 42 | 44 | 47 | 50 | 52 | 55 |
| RH% | 42 | 40 | 37 | 36 | 40 | 46 | 52 | 61 | 70 | 75 | 77 | 79 | 82 | 82 | 82 | 82 | 82 | 82 | 80 | 81 | 79 | 76 | 74 | 72 | |
| Wind (mph) | 7 | 6 | 6 | 5 | 3 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 5 | 6 | 7 |
| Gust (mph) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wind Chill (°F) | | | | | | | | 49 | 46 | 44 | 43 | 42 | 41 | 41 | 41 | 41 | 41 | 41 | 41 | 42 | 44 | 46 | 48 | | |
| Cloud Cover % | 8 | 11 | 17 | 20 | 24 | 32 | 36 | 38 | 42 | 46 | 50 | 54 | 56 | 58 | 63 | 69 | 74 | 79 | 82 | 86 | 95 | 99 | 99 | 100 | |
| Thunder % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Rain % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | SChc | SChc | Def |
| Snow % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Freezing Rain % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Sleet % | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Wind > 15 or Gust > 20 | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| Temp or Wind Chill ≤ 50°F | NO | NO | NO | NO | NO | NO | NO | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | YES | NO | NO |
| Cold Stress ≤ 40°F | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| Cold Stress > 40°F ≤ 50°F | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO | NO |
| DAY 2 | | | | | | | | | | | | | | | | | | | | | | | | | |
| Day-Month Hour (local) | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 17-Feb | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 |
| Temperature (°F) | 56 | 58 | 58 | 58 | 57 | 56 | 54 | 53 | 52 | 51 | 50 | 50 | 49 | 48 | 48 | 47 | 46 | 46 | 45 | 44 | 45 | 49 | 52 | 56 | 58 |
| RH% | 47 | 49 | 51 | 53 | 53 | 53 | 52 | 52 | 51 | 50 | 49 | 49 | 48 | 47 | 46 | 45 | 44 | 43 | 42 | 41 | 40 | 40 | 39 | 39 | |
| Wind (mph) | 7 | 7 | 6 | 5 | 5 | 6 | 6 | 6 | 7 | 7 | 7 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 6 | 7 | 7 | 8 | 8 | 8 |
| Gust (mph) | | | | | | | | | | | | | | | | | | | | | | | | | |
| Wind Chill (°F) | | | | | | | | | | | | 49 | 47 | 46 | 45 | 44 | 43 | 43 | 42 | 41 | 42 | 47 | | | |
| Cloud Cover % | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 95 | 86 | 77 | 67 | 58 | 53 | 51 | 47 | 45 | 43 | 33 | 10 | 10 | 9 | 9 | | | |

4.5.9.1. Once a tropical system develops in the Atlantic Basin, Gulf of Mexico, or Caribbean Sea, the Pope WU will be responsible for tracking updates posted by the NHC via the Hurricane Tracking (HURRTRAK) program and leveraging 26 OWS products. The Pope WU will fully utilize and not deviate from the tropical cyclone information provided by the 26 OWS.

4.5.9.3. The 26 OWS will produce a coordinated Tropical Cyclone Threat Assessment Product (TC-TAP) for Pope Field when sustained winds are expected to be ≥ 35 knots during the next 96 hours as a result of a tropical cyclone. The 26 OWS will provide site-specific TC-TAP information as requested by the Pope WU.

4.5.9.3.1.1. Time and date product was produced and the NHC bulletin number/identifier used to create the product.

4.5.9.3.1.3. Peak wind and time of occurrence, including gusts.

4.5.9.3.1.4. Onset and duration of operationally significant crosswinds (35 Knots).

4.5.9.3.1.5. Closest point of approach of the storm relative to the installation.

4.5.9.3.1.6. Forecast cone product.

4.5.9.3.2. The TC-TAP will be valid through a minimum of 96 hours and updated as new information is received from the NHC.

4.5.9.4. Briefings. WU personnel will give recommendations for Hurricane Evacuations (HUREVAC)/Hurricane Condition (HURCON) status and briefings as required by the CAT/AFOC. The CAT/AFOC will normally be activated 72 hours before the forecast arrival of sustained winds 30 knots or greater. The official forecast on all tropical systems will be verbatim with the bulletins published by the 26 OWS and NHC. WU personnel will not deviate from the official forecast position, track, movement, and maximum wind speed or intensity trend. The HURRTRAK program depicting the NHC forecast track will be used as the primary briefing tool. These products will provide the foundation for WU forecast products (winds, hurricane direction, etc.). However, inputs from the Pope WU may provide additional guidance to senior leadership based on their experience and training. Refer to the 440 AW Pope Field HUREVAC Plan for further guidance.

4.5.10. Special Event MWPs (Air Show etc.). The Pope Field WU will provide additional weather support for special events as required. Briefings will be produced and tailored based on the type of support.

4.5.11. Regional weather data via the Pope WU web site located at <https://cs3.eis.af.mil/sites/21228/SitePages/Weather%20Home.aspx> may provide additional information.

4.6. MISSIONWATCH. MISSIONWATCH is a deliberate process for monitoring terrestrial weather or the space environment for specific mission-limiting (e.g., ground, air, or space) environmental factors. The MISSIONWATCH process identifies and alerts decision makers to changes affecting mission success. The WU will use ORM and assign risk, allocate resources, and direct activities as required.

4.6.1. The WU will categorize missions in their MISSIONWATCH Log with potential high risk weather hazards as **SOME RISK** (Yellow) and **AT RISK** (Red) and continuously monitor these missions for significant changes to weather information by evaluating fine-scale perishable products. The WU will spot-check low risk missions. These are indicated as **NO RISK** (Green).

4.6.2. The WU will focus on mission-limiting weather thresholds for each specific mission. If there are any significant changes to the forecast based on parameters listed in **Table 3.5**, Mission Critical Weather Related Impacts/Actions or **Table 4.2**, MISSIONWATCH Log Criteria, the WU will contact the appropriate agencies listed in paragraph 4.6.6.

Table 4.2. MISSIONWATCH Log Criteria.

| |
|---|
| Ceiling/Visibility \geq 1500ft/3sm or NO for WWA's |
| None or Lgt Hazards = Neg |
| Ceiling/Visibility $<$ 1500ft/3sm but \geq 200ft/1/2sm or YES for WWA's |

Thunderstorms and MDT Hazards = MDT

Ceiling/Visibility < 200ft/1/2sm

SVR Hazards and SVR Thunderstorms = SVR

4.6.3. If there are any significant weather changes anytime between brief time and land time the WU will notify appropriate agencies listed in **Table 4.3**

4.6.4. The WU will evaluate for a change in risk for every mission and reprioritize MISSIONWATCH as required. The WU will then notify appropriate agencies listed in **Table 4.3**

4.6.5. Transient missions will not require a detailed MISSIONWATCH, but notify the aircraft of mission critical changes to the MWP via the **CP**.

4.6.6. Contact Agencies: The WU technician will notify the following organizations when significant changes occur and cross mission-limiting thresholds to MWPs, depending on mission supported:

Table 4.3. Contact Agencies.

| UNIT | POC | CONTACT NUMBER |
|--|-----------------|-----------------------|
| Command Post | Combined CP | HOTLINE/394-9000 |
| ATC Tower | ATC | HOTLINE/394-1672/1866 |
| 26 OWS | Zone Technician | 94-331-2639 |
| *2 Airlift Sq/95 Airlift Sq | Ops/Duty Desk | 394-7153 |
| *427 th Special Operations Sq | Ops Desk | 394-6417 |
| *Golden Knights | Ops Desk | 396-6772 or 396-6833 |
| *228 Aviation Regiment | Ops Desk | 396-3303 or 396-3766 |

4.6.7. Mission Decision Points. (C-130 Missions): The WU will be familiar with all criteria listed in **Table 3.6**, Surface Wind Limits for USAF Equipment Airdrops and **Table 3.7**, Surface Wind Limits for USAF Personnel Airdrops. Airdrop weather is checked at 5 and 3 hours prior and re-checks are made until crews step to the aircraft.

4.6.8. If requested, **provide alternatives** to the supported unit to exploit mission success. Remember this is the objective.

4.6.9. Update MWPs as required.

Chapter 5

STAFF WEATHER SERVICES

5.1. General. Staff services are those provided primarily by the WOM or other designated personnel. WU personnel executing the staff function will:

5.1.1. Liaise with 440 AW leadership and supported units to relay pertinent information on environmental threats.

5.1.2. Evaluate Special Weather Statements issued by the 26 OWS for environmental threats to the 440 AW and supported units and integrate the resulting information into risk management decision cycles.

5.1.3. Liaise directly with supported units (see paragraph 4.3.).

5.1.4. Evaluate support requirements and determine the most efficient solution to meet validated requirements.

5.1.5. Provide direct support to command, control, and planning functions.

5.1.6. Provide meteorological parameters, data, and subject matter expertise to the Pope Field installation Emergency Management (EM) team (Department of Emergency Services (DES), Fire Emergency Services, and Bioenvironmental Engineering (BEE) as required. The WU, as the Subject Matter Expert (SME) will optimize weather data input to Chemical Downwind Messages (CDMs) or any other weather information (as required) to support Chemical, Biological, Radiological, Nuclear, and High-yield Explosive (CBRNE) plume models when a real-time/real world event has occurred. The WU will also provide or arrange for delivery of CDMs generated from the Air Force Weather Agency (AFWA) or 26 OWS.

5.2. Staff Briefings. Staff weather briefings for 440 AW and 43 AG will be provided as required. The format of the briefing will be tailored to the scenario driving the Senior Staff's formation. Standard information includes a 24-hr forecast and a 7-day weather outlook.

5.3. Instrument Refresher Course (IRC) Briefings. The WU provides IRC briefings as required by course scheduling in accordance with AFMAN 11-210, *Instrument Refresher Program*. IRC schedulers will provide the WU with a schedule of upcoming IRCs as early in the process as possible. The weather portion of the briefing consists of an overview of the WU's Airfield and Mission Services, capabilities, WU and OWS responsibilities, resource protection, seasonal/regional weather, and space weather impacts (when applicable).

5.4. Crisis Action Team (CAT)/Air Force Operations Center (AFOC) Briefings. The WU will provide weather briefings as required for CAT/AFOC meetings. This includes exercise, hurricane (HUREVAC/HURCON support), and deployment briefings. Each briefing will be tailored to provide the appropriate weather intelligence required by wing leadership.

5.5. Climatology Services. Climatology information will be provided as requested including data for other locations. Requests should be made in advance to allow the WU to research and compile the information.

5.6. ATC Limited Observing Training. The WU will task certify new tower personnel to evaluate and take limited visibility observations. Tower controllers will study Air Training

Guide 60, (Tower Visibility Guide), Air Force Manual 15-111 (Surface Weather Observations), and watch a power point presentation on weather observing challenges unique to Pope Field to gain the knowledge necessary to complete the tower visibility examination. ATC personnel seeking training will call the WU and schedule an appointment. ATC personnel will also receive an orientation of the weather station.

5.7. Meteorological Subject Matter Experts (SMEs). All WU personnel will support any meteorological requests as time permits from the 440 AW, other Pope Field supported units, and government agencies. Requests from outside the DoD will be coordinated through Public Affairs. The WU will direct agencies needing specialized support to the appropriate supporting weather organizations or OWS and help guide them through the Support Assistance Request (SAR) process to make their request.

5.8. Flight Information Publications (FLIPs) Weather Updates. The WU is responsible for ensuring all weather information in the FLIP is accurate. All weather related updates will be requested through the Airfield Manager, 440 OSS/OSAA. The FLIP Manager will process the information using the DoD FLIP Revision Report to AFFSA/OL-D. Updates will fall in one of three categories: Add, Delete, Revise.

Chapter 6

RECIPROCAL SUPPORT

6.1. General. This section contains all of the specific local requirements submitted by various organizations throughout Pope Field, and verified by the WU. The requirements will be reviewed annually by the requesting unit and they are responsible for contacting the WU should their requirements change.

6.2. 440 AW/43 AG Public Affairs. Will act as the liaison office to receive, process, and forward all valid requests for weather services (forecasts, climatology, lectures, visits, etc.) from nonmilitary sources to the WU.

6.3. 440 OSS/OSAA (Airfield Management).

6.3.1. Ensure receipt of weather information and relay WWAs to other agencies as outlined in chapter 8 of this instruction.

6.3.2. Notify the WU immediately of all aircraft emergencies, incidents or accidents.

6.3.3. Provide the WU with current FLIPs. Submit required changes when requested by the WU.

6.3.4. Notify the WU of any JET outages. When JET is not operational, weather information will be disseminated via hotline or other suitable means.

6.3.5. Notify the WU of any changes to airfield operating hours.

6.3.6. Notify the WU of a change in runway condition (Dry, Wet, etc.)

6.3.7. Advise the WU of all changes in active runway.

6.3.8. Notify the WU when switching from commercial to generator power, or vice versa.

6.3.9. Notify the WU when switching from commercial to generator power, or vice versa.

6.4. 440 OSS/OSAT (Control Tower).

6.4.1. Notify the WU of weather communication equipment outages. When JET is not operational, weather information will be disseminated via hotline or other suitable means. The on-call weather technician will be recalled to the weather station to troubleshoot outages and/or provide weather data as required.

6.4.2. Conduct daily operational checks of the PMSV radio with the WU.

6.4.3. Perform Cooperative Weather Watch.

6.4.4. Advise the WU of all changes in active runway.

6.4.5. Relay PIREPS to the WU within 5 minutes of receipt.

6.4.6. Provide control tower orientation training for weather technicians.

6.5. Pope Field Combined CP (Command Post).

6.5.1. Monitor JET for updated weather conditions.

6.5.2. Run quick reference checklist (QRC) to notify wing leadership and various Pope agencies of severe weather when notified by Airfield Management via Secondary Crash Net.

6.5.3. Notify the WU of any JET outages. When JET is not operational, weather information will be disseminated via hotline or other suitable means.

6.5.4. Notify the WU if an OPREP-3 is required due to weather. The WU will provide information as required.

6.5.5. Notify the WU of recalls requiring WU briefing support, plus initial briefing time and location if required.

6.6. 440 AW/43 AG SE (Safety).

6.6.1. Notify the WU of any local aircraft mishap or aircraft damage where weather may have been a factor. The WU will provide information as required.

6.6.2. Notify the WU of any damage on Pope Field caused by weather.

6.6.3. Coordinate with the WU on all messages containing references to weather.

6.7. 440 AW/SG (Bio-Environmental Flight). The 440 Bio-Environmental Flight will provide Wet Bulb Global Temperature (WBGT) measurement to appropriate agencies when required.

6.8. 440 AW/CF (Communications Flight).

6.8.1. ATCALs maintenance will maintain the FMQ-19 and PMSV radio.

6.8.1.1. ATCALs will notify the WU prior to performing routine maintenance. The WU will review the weather conditions and recommend the most opportune time to perform PMIs.

6.8.1.2. ATCALs will ensure that routine/scheduled maintenance does not degrade METWATCH and MISSIONWATCH performed by the WU during periods of inclement weather.

6.8.2. Weather Equipment Restoring Priorities. Priorities for restoring critical weather systems have been established in the event natural disasters or any other anomaly simultaneously impacts systems base-wide. The priorities and response time for weather equipment are listed below (priorities may be adjusted based on incoming weather):

Table 6.1. Critical Weather Systems Priority Schedule.

| Equipment | Organization | Maintenance Response Time | Reference |
|--|---------------------|----------------------------------|---|
| FMQ-19 Wind Sensor, Cloud Height Sensor, Visibility Sensor | 440 CF/SCOA | I | 440 CF Comm/Elec (C-E) Restoral Plan |
| FMQ-19 (All Other Sensors) | 440 CF/SCOA | III | 440 CF Comm/Elec (C-E) |

| | | | |
|---|-------------|----|---|
| | | | Restoral Plan |
| PMSV Radio | 440 CF/SCOA | IV | 440 CF Comm/Elec (C-E) Restoral Plan |
| <p>I The appropriate C-E maintenance technician is notified immediately and a technician will respond within 2 hours.</p> <p>III The appropriate C-E maintenance technician is notified immediately and a technician will respond at 0715L the following day.</p> <p>IV The appropriate C-E maintenance work center is notified immediately and a technician will respond at 0715L the following duty day.</p> | | | |

6.8.3. Provide the WU at least 24-hour notice of any network and internet down time or interruption to service (e.g. JET SCA).

6.8.4. Weather information is crucial to safety of flight and resource protection. A restoral priority 1 shall be given if an unscheduled power outage occurs and/or there is a failure to communications in Bldg 708.

6.8.5. Follow the MOA between 24th Air Force, Air Force Director of Weather and Joint Environmental Toolkit Program Management Office concerning the roles and responsibilities and operational requirements in support of the installation, maintenance and sustainment of the JET SCA (e.g. installing AF Weather Weapon System (JET) security updates, TCNOs, etc.).

6.9. All Flying Units will:

6.9.1. Provide PIREPS, either directly to the WU (394-6543/6544), through the PMSV or ATC (pass to the WU within 5 minutes of receipt).

6.9.2. Provide feedback (via e-mail, survey, or phone call) to the WU for all missions considered non-effective due to weather. See paragraph 1.10. for more details.

6.9.3. When provided by the WU, fill out and return feedback forms back to the WU or WOM. See paragraph 1.10. for more details.

6.9.4. Ensure current flying schedule is sent to the WU (when available). Normally, the 2nd and 95th Airlift Squadron schedule will be provided by 440 OSS/OSO.

6.9.5. Support the weather liaison program. See paragraph 4.3. for details.

6.9.6. Provide space for weather debriefing/survey forms and contact info for respective unit weather liaison.

6.9.7. Provide guidance (at least 72 hours in advance) to the WU regarding any weather training/educational requirements (or changes in requirements), if applicable.

6.10. All Weather Support Recipients will:

6.10.1. If applicable, notify the WU of problems with their JET equipment after performing troubleshooting measures provided in checklists next to each JET terminal.

6.10.2. Notify the WU through the proper chain of command when new weather support requirements are identified.

6.10.3. Coordinate changes/additions to weather support requirements as soon as they are known.

Chapter 7

RESOURCE PROTECTION SERVICES

7.1. General. This section contains details on weather Watches, Warnings, and Advisories (WWAs), Severe Weather Action Procedures (SWAP), and other significant events where weather may be a factor. Resource protection is accomplished through a joint effort between the 26 OWS and the Pope WU. The 26 OWS is responsible for disseminating/issuing all forecasted weather watches and warnings. The WU acts as the “eyes forward” for the 26 OWS, and is responsible for disseminating/ issuing all observed warnings and advisories during the hours the WU is open. However, the WU can disseminate/issue any forecasted warning if there is an immediate threat to life and/or property. In these cases, the WU will be responsible for dissemination to local supported agencies and will back-brief the 26 OWS when time permits. Conversely, the WU will act as the alternate dissemination/issuing source for the 26 OWS. The goal is to provide the best possible resource protection to Pope Field.

7.2. Forecast Weather Watches. A weather watch is a special notice sent to supported units indicating that conditions are favorable for the development of a particular type of weather phenomena (e.g. tornadoes, hail, etc.). Watches should be issued at a minimum of one hour before a warning is issued, with the exception of the lightning watch, which should be issued at least 30 minutes before the lightning warning is issued. Watches are issued for a 5 NM radius of the center-point of the Pope Field runway complex when the potential for the criteria listed in [Table 7.1](#) exists.

Table 7.1. Forecast Weather Watch Criteria and Minimum Desired Lead-Times.

| Criteria | Desired Lead-Time |
|--|-----------------------|
| Tornado | As potential warrants |
| Severe Thunderstorm (Damaging Winds \geq 50 Knots and/or Damaging Hail \geq 3/4 Inch) | As potential warrants |
| Damaging Winds (Surface Winds \geq 50 Knots not associated with thunderstorms) | As potential warrants |
| Freezing Precipitation (Any Type/Intensity) | As potential warrants |
| Heavy Snow (\geq 2 Inches in \leq 12 Hours) | As potential warrants |
| Heavy Rain (\geq 2 Inches in \leq 12 Hours) | As potential warrants |
| Blizzard (Winds (sustained or gust) \geq 30 Knots, surface vis \leq 1/4 SM, considerable falling and/or blowing snow, for a duration \geq 3 Hours) (All criteria must be met) | As potential warrants |
| Lightning within 5 NM of the airfield | 30 minutes |

Note: Lightning Watches are canceled only when the potential for lightning within the next 30 minutes is no longer forecast. Lightning Watches are also not canceled if there is potential for another thunderstorm within 30 minutes.

7.3. Forecast Weather Warnings. Weather warnings are special notices sent out to supported units alerting them of a predefined weather event which will pose a threat to life or property. Warnings are issued for a 5 NM radius of the center-point of the Pope runway complex when the criteria listed in **Table 7.2** is expected to occur.

Table 7.2. Forecast Weather Warning Criteria and Minimum Desired Lead-Times.

| Criteria | Desired Lead-Time |
|--|-------------------|
| Tornado | 15 Minutes |
| Severe Thunderstorm (Damaging Winds \geq 50 Knots and/or Damaging Hail \geq 3/4 Inch) | 1 Hour |
| Moderate Thunderstorm (High Winds \geq 35 Knots but $<$ 50 Knots and /or Large Hail \geq 1/4 Inch to $<$ 3/4 Inch) | 1 Hour |
| Damaging Winds (Surface Winds \geq 50 Knots not associated with thunderstorms) | 1 Hour |
| Strong Wind (Surface Winds \geq 35 Knots but $<$ 50 Knots not associated with thunderstorms) | 1 Hour |
| Freezing Precipitation (Any Type/Intensity) | 1 Hour |
| Heavy Snow (\geq 2 Inches in \leq 12 Hours) | 1 Hour |
| Heavy Rain (\geq 2 Inches in \leq 12 Hours) | 1 Hour |
| Blizzard (Winds (sustained or gust) \geq 30 Knots, surface vis \leq 1/4 SM, considerable falling and/or blowing snow, for a duration \geq 3 Hours) (All criteria must be met) | 1 Hour |
| Note: The WU will immediately contact the Command Post via phone if a <u>Tornado Warning is issued</u> (To activate Giant Voice/Siren). | |

7.4. Observed Weather Warnings. Lightning warnings are the only type of observed warning issued for Pope Field. The WU will issue observed weather warnings for Pope Field when lightning is occurring within 5 NM or 10 NM of the airfield. Lightning warnings are not issued until lightning is observed either, visually by the FMQ-19, or on AFW-WEBS using Vaisala's Global Lightning Dataset 360. The WU will provide timely notification to all supported units upon issuance and expiration of a lightning warning via JET. Observed warnings are issued when the criteria listed in **Table 7.3** is occurring.

Table 7.3. Observed Weather Warning Criteria and Minimum Desired Lead-Times.

| Criteria | Desired Lead-Time |
|--|-------------------|
| Lightning observed within 5 NM of the airfield | First Observed |
| Lightning observed within 10 NM of the airfield | First Observed |
| Note: If the WU is closed the 26 OWS will issue all observed weather warnings. Cancel warnings for OBSERVED LIGHTNING when thunderstorms have dissipated or passed beyond the area covered by the warning and lightning is no longer occurring within 5 NM or 10 NM of the airfield. For lightning warning cancellations, include a statement indicating its affect on any previously issued warnings, such as "WEATHER WARNING #XX-XXX remains in effect" or —WEATHER WATCH #XX-XXX FOR LIGHTNING REMAINS IN EFFECT. | |

7.5. Observed Weather Advisories. An observed weather advisory is a special notice sent to supported units alerting them that a predefined weather phenomenon, which may impact operations, is occurring on Pope Field. The WU will issue observed advisories for a 5 NM radius of the center-point of the runway complex. All advisories for Pope Field are observed; there are no forecasted weather advisories for Pope Field. Observed advisories are issued when the criteria listed in [Table 7.4](#) is occurring.

Table 7.4. Observed Weather Advisory Criteria and Minimum Desired Lead-Times.

| Criteria | Desired Lead-Time |
|---|-------------------|
| Surface Winds \geq 20 knots | First Observed |
| Sustained Surface Winds \geq 15 knots | First Observed |
| Crosswinds \geq 15 knots | First Observed |
| Moderate or Greater Turbulence (CAT II/Restricted C-130) | First Observed |
| Moderate or Greater Icing | First Observed |
| Low Level Wind Shear | First Observed |
| Note: If the WU is closed the 26 OWS will issue all observed weather advisories. | |

7.6. WWAs numbering and text. WWAs are identified numerically by month and by sequential number of the watch, warning, and/or advisory issued. For example, a warning number of "09-002" indicates the month of September (09), and the warning is the 2nd (002) one issued in September. The text of a warning, watch, or advisory will be worded so that all recipients may easily understand it. See Attachment 4 for examples of different messages.

7.7. Documentation.

- 7.7.1. All WWAs issued by the 26 OWS or WU will be kept via JET.
- 7.7.2. Only one warning will be in effect at any given time (and will include multiple warning criteria as required) except for Tornado warnings and/or Observed Lightning warnings. Included, will be maximum hail size, maximum rain/snow accumulation, or maximum wind speed as applicable in warnings and advisories.
- 7.7.3. Watches are stand alone products based upon potential and are unaffected by warnings or advisories for the same phenomena.
- 7.7.4. All observed weather advisories and warnings are valid until further notice (UFN).
- 7.7.5. Weather watches and warnings may be extended provided the extension is issued prior to the expiration of the original notice.
- 7.7.6. A warning is upgraded by adding a phenomena or crossing to a higher threshold. A warning is downgraded by removing a phenomena or crossing to a lower threshold.
- 7.7.7. It will be clearly state how the amended or extended weather watch or warning affects any previously issued notice.
- 7.7.8. Forecast weather warnings and advisories will maintain horizontal consistency with the TAF and other forecast products. Watches are not required to be included in the body of the TAF-coded forecast depending on circumstance.
- 7.7.9. If necessary, the Pope WOM will request a formal forecast review from the 26 OWS for severe weather events that negatively influence the effective execution of military operations. The 26 OWS will be the primary OPR for the formal review, and the WU will provide inputs and coordination as required.

7.8. The Pope WU will:

- 7.8.1. Contact the 26 OWS when a weather warning is occurring or likely to occur and the 26 OWS has not issued the corresponding warning.
- 7.8.2. Notify the 26 OWS when weather warning phenomenon has ended.
- 7.8.3. Use ORM to issue or supersede weather warnings when threatening weather conditions that could impact the mission and/or resources are imminent and a forecast weather warning has not been issued (or if issued, is not representative). The Pope WU will be responsible for local dissemination.
- 7.8.4. Inform the 26 OWS as soon as possible after-the-fact when the WU has issued or superseded a weather warning. Once notified, the 26 OWS can assume responsibility/accountability for the warning.
- 7.8.5. Cancel all weather warnings (if required) or observed advisories when conditions are no longer expected to occur.

7.9. Severe Weather Action Procedures (SWAP). The SWAP ensures processes are in place and sufficient personnel are available during potential/actual severe weather events or during meteorological/operational events critical to mission success. The Pope WU will use the ORM process to identify the potential for severe weather and evaluate/analyze fine-scale perishable weather products to support the assessment of severe weather conditions. These procedures

document a two-tier system with the Pope WU and the 26 OWS sharing responsibilities for the SWAP and resource protection.

7.9.1. The SWAP will be initiated when the threat of severe weather and conditions requiring notification listed in [Table 7.5](#) exists. The SWAP will be under the direction of the WOM or designate and remain established until the threat of severe weather passes.

Table 7.5. Conditions Requiring Notification to Implement SWAP.

| 1. One of the following <i>Weather Watches</i> is issued: | |
|--|---|
| Weather Condition | Desired Notification/ Activation Lead Time |
| Tornado | As potential warrants |
| Severe Thunderstorm (Damaging Winds \geq 50 Knots and/or Damaging Hail \geq 3/4 Inch) | As potential warrants |
| Damaging Winds (Surface Winds \geq 50 Knots not associated with thunderstorms) | As potential warrants |
| Freezing Precipitation (Any Type/Intensity) | As potential warrants |
| Heavy Snow (\geq 2 Inches in \leq 12 Hours) | As potential warrants |
| Heavy Rain (\geq 2 Inches in \leq 12 Hours) | As potential warrants |
| Blizzard (Winds (sustained or gust) \geq 30 Knots, surface vis \leq 1/4 SM, considerable falling and/or blowing snow, for a duration \geq 3 Hours) (All criteria must be met) | As potential warrants |
| 2. One of the following <i>Weather Warnings</i> is issued: | |
| Weather Condition | Desired Lead-Time |
| Tornado | 15 Minutes |
| Severe Thunderstorm (Damaging Winds \geq 50 Knots and/or Damaging Hail \geq 3/4 Inch) | 1 Hour |
| Damaging Winds (Surface Winds \geq 50 Knots not associated with thunderstorms) | 1 Hour |

| | |
|---|-------------|
| Freezing Precipitation (Any Type/Intensity) | 1 Hour |
| Heavy Snow (≥ 2 Inches in ≤ 12 Hours) | 1 Hour |
| Heavy Rain (≥ 2 Inches in ≤ 12 Hours) | 1 Hour |
| Blizzard (Winds (sustained or gust) ≥ 30 Knots, surface vis $\leq 1/4$ SM, considerable falling and/or blowing snow, for a duration ≥ 3 Hours) (All criteria must be met) | 1 Hour |
| 3. One of the following Weather Watches is issued by the National Weather Service (NWS) for Richmond, Lee, Harnett, Cumberland, Robeson, Scotland, Hoke, Bladen or Sampson Counties: | |
| a. Tornado Watch | When Issued |
| b. Severe Thunderstorm Watch | When Issued |
| c. Flood/Flash Flood Watch | When Issued |
| d. Any Winter Related Advisory/Watch | When Issued |
| 4. In the event of unforeseen circumstances, such as a communications line failure, a critical equipment outage at either the 26 OWS or the WU, the WU will implement the SWAP at the 26 OWS's request. The 26 OWS, as the agency ultimately responsible for forecast watch/warning support, will have this prerogative in the interest of Pope Field resource protection and flight safety. | |
| 5. Severe Thunderstorms are identified upstream within 100 NM of Pope Field | |
| 6. Any other event or situation that the on-duty weather technician (26 OWS or Pope WU) deems notification is necessary | |

7.9.2. Notification. The Pope WU technician will notify the WOM or designate or the 26 OWS weather technician will notify the on-call Pope WU technician according to the following guidance:

7.9.2.1. During normal staff duty hours (0500 – 2300L), Monday through Friday, except federal holidays, or during the 440 AW UTA days, the Pope WU technician will implement the SWAP by notifying the WOM or designate either in person or by phone whenever one or more conditions listed in [Table 7.5](#) are met. Together they will use the ORM process to assess/analyze the risk and determine risk control decisions. If the

SWAT is activated on direction from the WOM or designate the responsibilities/duties listed in **Table 7.6** will be executed.

7.9.2.2. On-Call Procedures. During nights, weekends, and federal holidays the 26 OWS weather technician will implement the SWAP by notifying the on-call Pope WU technician by home phone/cell phone whenever one or more conditions listed in **Table 7.5** are met to determine if the SWAT is to be activated.

7.9.2.2.1. The 26 OWS will discuss the meteorological situation with the on-call Pope WU technician. The Pope WU technician will use ORM to de-conflict differences of meteorological opinion with the 26 OWS and determine if a valid severe weather condition is agreed upon. If not agreed upon, the Pope WU technician will defer (final determination) to the 26 OWS and document the disagreement for the WOM to review.

7.9.2.2.2. If time permits, the on-call Pope WU technician will then call the WOM or designate and discuss the meteorological situation. Together they will use the ORM process to assess/analyze the risk and determine risk control decisions (i.e., recall to the weather station, more personnel needed for support etc.). If the WOM cannot be contacted or if time is a factor, report to the weather station immediately.

7.9.2.2.3. Upon arrival to the weather station, the on-call Pope WU technician will evaluate the situation using the ORM process, determine the need to recall the WOM or designate or more personnel, and begin to execute the SWAT duties/responsibilities in **Table 7.6**

7.9.2.3. If the potential for severe weather exists within the next 12 hours but is NOT occurring or imminent, the on-duty Pope WU technician will contact the WOM to advise him of the situation. Together, they will use the ORM process to evaluate and assess the severe weather risk.

Table 7.6. SWAT Duties.

| | | Pope Field WU Technician |
|----|--|--|
| | | <i>Use the ORM process for these duties</i> |
| | | |
| 1. | | Notify/recall the WOM or designate. Phone numbers can be found on the on-call roster. |
| 2. | | Conduct a concise forecast discussion of the current situation with the 26 OWS for situational awareness and to update the WOM upon his arrival. |
| 3. | | Initiate and maintain an events log as time permits IAW local policy. |
| 4. | | Perform Weather Radar Operator duties (If required) . |
| 5. | | Continually coordinate with the 26 OWS on the issuance of watches or warnings. |

| | | |
|-----|--|---|
| 6. | | Notify appropriate agencies of the issuance of watches, warnings, or advisories (If required) . |
| 7. | | Advise senior Pope Field leadership of the situation as requested. |
| 8. | | Eyes Forward - Intensify monitoring of local and area weather to enhance METWATCH / MISSIONWATCH. (Be prepared to supplement the FMQ-19 and log in as required) |
| 9. | | Issue observed warnings and advisories (As required) . |
| 10. | | Review PIREPs, SIGMETs, and area NWS forecasts products for severe weather reports. If applicable, incorporate into products. |
| 11. | | Update Mission Weather Products (MWP) (If required) . |
| 12. | | Review the WOM checklist and begin duties, as necessary, until he arrives (If required) . |
| 13. | | Provide inputs to post-event OPREP-3 report (If required) . Archive data for and perform forecast review (After event is over). |
| | | |
| | | Weather Operations Manager |
| | | <i>Use the ORM process for these duties</i> |
| | | |
| 1. | | When first notified, report to the weather station as soon as possible (If required) . Determine if the situation warrants the recall/placement of additional personnel. |
| 2. | | Upon arrival, receive initial forecast discussion from the Pope WU technician to obtain situational awareness. |
| 3. | | When time allows conduct a forecast discussion with the 26 OWS technician/zone supervisor. |
| 4. | | Ensure duty positions are delegated and members are performing assigned tasks (If required) . a. Pope Field WU Technician Duties b. Weather Radar Operator Duties |
| 5. | | Ensure the following tasks are continuously monitored and if necessary: a. Recall additional personnel if needed. b. Adjusts duties as deemed necessary. |

| | | |
|----|--|--|
| | | c. Keep senior Pope Field leadership, command post, and supported units apprised of latest developments. d. Keep personnel focused on assigned tasks. e. Ensure all applicable watches, warnings, and advisories are issued and notification has been accomplished. f. Review all forecast products for accuracy and horizontal consistency (e.g., watches, warnings, and advisories, TAFs, and MWP). g. Provide meteorological expertise and guide decision making. |
| 6. | | Conduct post-event review and discussion to provide Pope WU technicians with feedback (positive and negative). |
| 7. | | Consolidate inputs and coordinate with 26 OWS for OPREP-3 report and provide to Pope Command Post (If required) . |
| | | |
| | | Weather Radar Operator |
| | | <i>Use the ORM process for these duties</i> |
| | | |
| 1. | | Interrogate storms and related phenomena using radar and lightning detection products. |
| 2. | | Keep other SWAT members informed of local severe activity. |
| 3. | | During tornado and thunderstorm events, provide storm positions and movements. |
| 4. | | During thunderstorm events, advise other SWAT members when thunderstorms are within 10 nm and 5 nm. |
| 5. | | Help answer phones and questions. |
| 6. | | Help answer PMSV calls. |
| 7. | | Assist other SWAT members as needed to accomplish critical tasks. |
| 8. | | Archive data if deemed necessary. |
| 9. | | Provide inputs to and contribute to forecast review. Provide inputs to OPREP-3 report (If required) . |

7.9.3. Unless the occurrence of severe weather was unexpected, the Pope WU technician (either on-duty or on-call) will be notified as soon as possible before the expected occurrence of severe weather. A forecast discussion will then be conducted with the 26 OWS.

7.9.4. The Pope WU, 26 OWS, and Simmons WU (if on duty) will work as a team during severe weather events and conduct forecast discussions when necessary. The Pope WU technician will serve as the “eyes forward” for the OWS and pass severe weather reports from local sources (e.g. National Weather Service, local news media and off-duty personnel) to the 26 OWS.

7.9.5. When discussing and using AFWA products and OWS-issued watches and warnings, the Pope WU technician will maintain product consistency and convey products verbatim to supported units and in MWPs. Under normal situations, the Pope WU technician will not modify and/or supplement OWS-issued weather watches or warnings.

7.9.6. Post Event Procedures. If severe weather occurs the Pope WU will accomplish the following:

7.9.6.1. Pass any severe weather reports that are not normally available through standard observations to the 26 OWS Flight leadership. Examples include reports from local law enforcement and emergency management agencies, and local news media. Reports will be passed immediately after fulfilling any local distribution requirement so the 26 OWS can use the reports during post analysis and verification.

7.9.6.2. Ensure the 26 OWS SWAT leader performed a “weather data save” and provided all pertinent information to the WOM. The WOM will compile the information and provide a summary to the 26 OWS/DO and 26 OWS/CC for further dissemination at their discretion.

7.9.6.3. Provide weather information to Pope Field Command Post in accordance with local SOPs. If the 26 OWS was acting as the Pope WU, coordinate with them on events reported to the Pope Field Command Post.

7.9.7. The Pope WU will conduct severe weather exercises at least annually.

7.10. Tropical Weather. Pope Field is located in a hurricane threat zone. Hurricane season lasts from June through November. However, hurricanes have occurred at other times throughout the year. Pope doesn’t have to worry about storm surge, but other serious threats that can occur with the hurricane are tornados, extreme wind gusts, and flash flooding. These natural phenomena cause extensive damage and degrade the mission of all supported missions on Pope Field.

7.10.1. Once a tropical system develops in the Atlantic Basin, Gulf of Mexico, or Caribbean Sea, the Pope WU will be responsible for tracking updates posted by the NHC via the HURRTRAK program and leveraging 26 OWS products (TC-TAP).

7.10.2. The official forecast on all tropical systems will be verbatim with the bulletins published by the NHC. WU personnel will not deviate from the official forecast position, track, movement, and maximum wind speed or intensity trend. The WU is authorized to tailor the official tropical cyclone forecasts into a specific mission forecast product for the Pope Field supported units. Tailoring may include factors such as specific local effects such as terrain or relative position to the storm.

7.10.3. The 26 OWS will perform METWATCH and serve as liaison between the NHC and WU.

7.10.4. The 26 OWS will use the wind forecasts from the tropical cyclone bulletins and tailor the forecasts for terrain effects for issuance in TAFs and WWAs.

7.10.5. The WU will translate the official tropical cyclone forecast and 26 OWS forecasts into a specific mission forecast for Pope supported units. All briefing products provided to supported units will contain the statement that “48-hour and 72-hour outlooks (or longer) contain a high degree of uncertainty, are for planning purposes only, and are subject to change”. It will also include the forecast error probability statements included in discussion bulletins or other forecast products.

7.10.6. Hurricane/tropical storm advisories are issued to alert agencies of potential for sustained winds of 50 knots or greater (HURCON) and potential for sustained winds of 30 knots or greater. The conditions/phases give sufficient preparation time to safeguard personnel, aircraft, equipment, and facilities.

7.10.7. Winds of 64 knots or higher are classified as hurricane force winds. However, all planning actions will be based on forecast winds of 30 knots or greater. The wing’s decision to evacuate should be made early (approximately 24 hours prior to 30 knot winds arriving) to avoid aircraft take-off wind limitations and departure delays due to saturation of air traffic routes and control facilities and wind limitations.

Table 7.7. HURCON Definitions.

| HURCON LEVEL | <u>DEFINITION</u> |
|---------------------|---|
| 5 | Tropical Cyclone expected to impact the SE US/Carolina Coast |
| 4 | 72 hours prior to forecast arrival of 50 knot sustained winds |
| 3 | 48 hours prior to forecast arrival of 50 knot sustained winds |
| 2 | 24 hours prior to forecast arrival of 50 knot sustained winds |
| 1 | 12 hours prior to forecast arrival of 50 knot sustained winds |

7.10.8. During duty hours, WU personnel will ensure tropical system updates are sent by e-mail to 440 AW and 43 AG key personnel.

7.10.9. WU personnel will give recommendations for HURCON status and briefings as required by the CAT/AFOC. The CAT/AFOC will normally be activated 72 hours before the forecast arrival of sustained winds 30 knots or greater.

7.10.10. WU technicians will aid the 26 OWS to support any flying operations and forecasts for Hurricane Evacuation. If the 26 OWS cannot conduct operations, the Pope WU will take over issuing TAFs and weather watches/warnings. In addition to TAFs and watch/warning criteria, the following information will need to be forecast:

7.10.10.1. Onset and duration of 35 knot crosswinds impacting C-130 operations.

7.10.10.2. Onset and duration of 30 knot sustained winds.

7.10.10.3. Onset and duration of 50 knot sustained winds.

7.10.10.4. Time and range of storm center at closest point of approach

7.10.11. Weather information will not be released to non-DoD agencies or the general public without approval from the 440 AW Public Affairs and Legal offices.

7.11. Chemical Downwind Messages (CDMs). Pope WU personnel will use the 26 OWS generated CDM on their webpage if available.

Table 7.8. Example CDM.

| | | | | | Valid Time: 17/1200 Z | | | |
|-------|-----|-----|--|---|-----------------------|---|---|-------|
| Valid | DDD | FFF | | S | TT | H | W | C |
| WM: | 040 | 007 | | 2 | 18 | 7 | - | 2(ov) |
| XM: | 010 | 007 | | 2 | 16 | 8 | - | 2(ov) |
| YM: | 020 | 011 | | 2 | 16 | 9 | 6 | 2(ov) |
| | | | | | Valid Time: 17/1800 Z | | | |
| Valid | DDD | FFF | | S | TT | H | W | C |
| WM: | 040 | 016 | | 2 | 21 | 9 | 6 | 2(ov) |
| XM: | 040 | 016 | | 2 | 21 | 9 | 9 | 1(BK) |
| YM: | 040 | 009 | | 2 | 18 | 9 | 4 | 0(FW) |
| | | | | | | | | |

| Term | Explanation |
|--------------|---|
| Valid | WM = Valid Time thru Valid Time + 2 Hours XM = Valid Time + 2 Hours thru Valid Time + 4 Hours YM = Valid Time + 4 Hours thru Valid Time + 6 Hours |
| DDD | Wind Direction that wind is blowing towards (normal wind direction is blowing from) M = Missing Data |
| FFF | Wind Speed in Kilometers per Hour M = Missing Data |

| | |
|-----------|--|
| S | Stability 1 = Very Unstable 2 = Unstable 3 = Slightly Unstable 4 = Neutral 5 = Slightly Stable 6 = Stable 7 = Very Stable <i>(Stability calculation is based on MM5 derived Lifted Index, Vertical Velocities, Sun Angle, Cloud Cover, and Weather. However, it does not take into account Terrain)</i> |
| TT | Temperature in degrees Celsius (Readings above 50 indicate negative numbers 17 = 17C, 54 = -4C) M – Missing Data |
| H | Relative Humidity 0 = 00-09% 1 = 10-19% 2 = 20-29% 3 = 30-39% 4 = 40-49% 5 = 50-59% 6 = 60-69% 7 = 70-79% 8 = 80-89% 9 = 90-100% M = Missing Data |
| W | Weather 0 = None 3 = Blowing Sand/Dust/Snow 4 = Fog or Haze restricting Visibility to less than 4 miles 5 = Drizzle 6 = Rain 7 = Snow or Rain/Snow Mixed 8 = Showers 9 = Thunderstorms |
| C | Cloud Cover 0 = Clear to Scattered Sky 1 = Broken 2 = Overcast |

7.12. CBRNE Support. The Pope WU will:

7.12.1. Get familiar with the CBRNE plume models utilized by the EM team (e.g., Joint Effects Model (JEM), Area Locations of Hazardous Atmospheres (ALOHA), Computer-Aided Management of Emergency Operations (CAMEO), Mapping Application for Response, Planning, Local Operational Task (MARPLOT)), their tactical decision aid outputs, and uses in the commanders' decision cycles.

7.12.2. Understand the variety of possible weather input options within each model for each type of C, B, R, N and E event.

7.12.3. Recommend and provide the most appropriate weather data type for the EM team to use to run their chosen CBRNE model to assess a real-time event which has occurred at a specific location and time.

7.12.4. Help in determining the optimal weather data type for the chosen CBRNE model.

7.12.5. In most cases, transport models can be configured to automatically pull observed or forecast gridded model. The WU will provide a region-specific model data recommendation consistent with the CU model (WRF). Historical climatological data should not be recommended except for training or long-term planning where canned scenarios are being used.

7.12.6. If surface observations or alphanumeric forecasts are requested, make sure that observations and forecasts provided are representative of the location/time of the CBRNE event.

7.12.7. Work closely with the EM team to ensure the commander gets a consistent picture.

7.13. Bioenvironmental Information. The 440th Bioenvironmental Engineering Flight measures and determines the actual Wet Bulb Globe Temperature (WBGT) Index. Heat categories (Category 1 through 5) are ranges of the WBGT Index. The Pope WU has a link on their web page for a breakdown of the heat category and recommended actions. There is also a link to the Wind Chill Index.

Chapter 8

WEATHER INFORMATION DISSEMINATION

8.1. General. TAFs, weather observations, and WWAs are useful only if supported units have access to them. Timely and efficient dissemination of weather information is crucial to the success of the wing mission and resource protection. Most organizations will receive this information via our primary dissemination system (JET). Some organizations will receive courtesy calls, however, AFI 10-229, *Responding to Severe Weather Events*, restricts the WU from directly notifying (via telephone) more than 3 organizations in order to focus on incoming weather phenomena. This section describes the weather dissemination systems, dissemination procedures, and back-up systems and procedures.

8.2. Dissemination Systems and Back-ups.

8.2.1. Currently the WU uses JET as its primary method of disseminating TAFs, weather observations, and WWAs. Other agencies requiring direct access to JET have been given a login and password. Agencies without JET access will receive critical weather information through their unit's own dissemination system (e.g. Pyramid Alert Recall, Unit Control Center, etc). The WU will follow documented backup dissemination procedures documented in the SOPs in the event that JET is inoperative.

8.2.2. Local Area Network (LAN). The LAN is the primary method used for disseminating GDSS2 briefings (if required). Additionally, it is used as the backup system for disseminating and receiving all weather information. In the event of a LAN outage and the WU is providing GDSS2 briefing support, they will contact TACC to complete the briefings.

8.2.3. Hotlines. Hotlines have been installed between the WU and other agencies for the sole purpose of rapidly exchanging weather data. Normal phone lines will be used in the event of a hotline outage.

8.2.3.1. Command Post (4-9000)

8.2.3.2. Tower (4-1672/1866)

8.2.3.3. Airfield Management (4-6508)

8.3. Dissemination and Back-Up Procedures.

8.3.1. TAFs. TAFs will be entered and disseminated through JET as described in Chapter 4. If the JET is out of service then the WU will disseminate the information locally via standard telephone lines to the CP and tower.

8.3.2. Weather Observations. Observations will be taken and disseminated through the JET as described in Chapter 2. When the JET is out of service, observations will be disseminated worldwide through the AFW-WEBS. If all long-line transmission resources are out of service, call via telephone (voice relay) to the 26 OWS or any other weather station for worldwide transmission. Locally, observations will be relayed by the WU to the following organizations (noted on a local dissemination log), in order of priority when the JET is out of service:

8.3.2.1. Tower (Hotline/4-1672/1866)

8.3.2.2. Airfield Management Operations (same building as the WU/4-6508)

8.3.2.3. Command Post (4-9000)

Note: Other base organizations can view weather observations through the WU webpage.

8.3.3. WWAs. WWAs will be disseminated via JET. The WU will contact the 26 OWS when observed warnings and advisories are issued. If the JET is out of service, the 26 OWS and/or WU will contact the same organizations listed above in order of priority (via phone line). Further dissemination by Airfield Management and the CP is as follows:

8.3.3.1. Airfield Management. Airfield Management relays all WWAs via the secondary crash phone. (landlines are used for backup purposes):

8.3.3.2. Pope Field Combined CP. The CP disseminates all WWAs by telephone and Giant Voice.

8.3.3.3. Tornado Warnings. The WU will immediately contact the CP via phone if a Tornado Warning is issued. The CP has the primary responsibility for activating Giant Voice/Sounding the Siren.

8.3.3.4. Lightning Warnings. Lightning warnings are also disseminated via JET. All lightning warnings are disseminated to the base populace by the CP via the Giant Voice system allowing all members on Pope Field to be prepared.

NORMAN R. HAM JR., Brig Gen, USAFR
Commander

Attachment 1**GLOSSARY OF REFERENCES AND SUPPORTING INFORMATION*****References***

AFPD 15-1, *Air Force Weather Operations*, 19 February 2010

Air Force Strategic Plan on Weather Reengineering, 8 August 1997

AFI 10-206, *Operational Reporting*, 06 September 2011

AFI 10-229, *Responding to Severe Weather Events*, 15 October 2003

AFI 10-2501, *Air Force Emergency Management (EM) Program Planning and Operations*, 24 January 2011

AFI 10-2607, *Air Force Chemical, Biological, Radiological, and Nuclear (CBRN) Survivability*, 25 February 2010

AFI 11-2C-130v3, *C-130J Operations Procedures*, 8 December 2009

AFI 11-202 V3, *General Flight Rules*, 22 October 2010

AFI 15-114, *Functional Resource and Weather Technical Performance Evaluation*, 07 December 2001

AFI 15-128, *Air Force Weather Roles and Responsibilities*, 07 February 2011

AFMAN 11-210, *Instrument Refresher Program (IRP)*, 03 February 2005

AFMAN 15-111, *Surface Weather Observations*, 27 February 2013

AFMAN 15-124, *Meteorological Codes*, 28 February 2013

AFMAN 15-129V1, *Air and Space Weather Operations – Characterization*, 06 December 2011

AFMAN 15-129V2, *Air and Space Weather Operations – Exploitation*, 07 December 2011

AFI 91-203, *Air Force Consolidated Occupational Safety Instruction*, 15 June 2012

440 AWI 11-250, *Local Flying Operating Instruction*, 28 August 2013

Pope Field Communications Electronics (C-E) Restoral Plan

AFPAM 48-151, *Thermal Injury*, 18 November 2002

Installation Data Page between 440 OSAW and 26 OWS, *Weather Products, Criteria, and Information*, 5 April 2013

Abbreviations and Acronyms

AGL—Above Ground Level

AF—Air Force

AFMAN—Air Force Manual

AFI—Air Force Instruction

AFB—Air Force Base

AFOC—Air Force Operations Center
AFPD—Air Force Policy Directive
AFW—Air Force Weather
AFWA—Air Force Weather Agency
AFW-WEBS—Air Force Weather Web Service
AMOS—Automated Meteorological Observing System
AOR—Area of Responsibility
AS—Airlift Squadron
ATC—Air Traffic Control
ATCALs—Air Traffic Control and Landing Systems
AW—Airlift Wing
BWW—Basic Weather Watch
CAT—Crises Action Team
CBRNE—Chemical, Biological, Radiological, Nuclear, and High-Yield Explosive
CC—Commander
CDM—Chemical Downwind Message
CIG—Ceiling
CONUS—Continental United States
CP—Command Post
CS—Communications Squadron
DO—Director of Operations
DZ—Drop Zone
EDM—Effective Downwind Messages
EM—Emergency Management
EWO—Emergency War Orders
FLIP—Flight Information Publication
FWB—Flight Weather Briefing
GPS—Global Positioning System
GMT—Greenwich Mean Time
HF—High Frequency
HQ—Headquarters
HURCON—Hurricane Condition

HUREVAC—Hurricane Evacuation
HURRTRAK—Hurricane Tracking
IAW—In Accordance With
IRC—Instrument Refresher Course
JA/ATT—Joint Airborne and Air Transportability Training
JET—Joint Environmental Toolkit
JFEX—Joint Forcible Exercise
KTS—Knots
LAN—Local Area Network
METAR—Routine Meteorological Observation Report
METSAT—Meteorological Satellite
METWATCH—Meteorological Watch
MOA—Memorandum of Agreement
MOC—Maintenance Operations Center
MSL—Mean Sea Level
MWP—Mission Weather Product
NHC—National Hurricane Center
NM—Nautical Mile
NOAA—National Oceanic and Atmospheric Administration
NOTAM—Notices to Airmen
OG—Operations Group
OPR—Office of Primary Responsibility
OWS—Operational Weather Squadron
OPREP—Operational Report
OSS—Operations Support Squadron
PA—Pressure Altitude
PIREP—Pilot Report
PMSV—Pilot to Metro Service
QA—Quality Assurance
QRC—Quick Reference Checklist
RVR—Runway Visual Range
RWY—Runway

SAR—Support Assistance Request
SE—Safety Office
SIGMET—Significant Meteorological Information
SOP—Standard Operating Procedure
SPECI—Special Weather Observation
SWAP—Severe Weather Action Procedures
SWAT—Severe Weather Action Team
TAF—Terminal Aerodrome Forecast
TC— Tropical Cyclone
TC-TAP—Tropical Cyclone Threat Assessment Products (TC-TAP)
TWR—Tower
UA—Upper Air
UFN—Until Further Notice
UHF—Ultra High Frequency
UTA—Unit Training Assembly
UUA—Urgent Upper Air
VFR—Visual Flight Rules
VHF—Very High Frequency
VIS—Visibility
WF—Weather Flight
WOM—Weather Operations Manager
WU—Weather Unit

Attachment 2

SPECIAL WEATHER OBSERVING CRITERIA

A Special (SPECI) weather observation will be taken and disseminated for the following criteria:

A2.1. Ceiling. When the ceiling goes below or, if below, increases to equal or exceed any of the values listed below:

| Height | Height |
|-----------|----------|
| 3000 Feet | 600 Feet |
| 2000 Feet | 500 Feet |
| 1500 Feet | 200 Feet |
| 1000 Feet | |
| 900 Feet | |
| 800 Feet | |
| 700 Feet | |

A2.2. A layer of clouds or obscuring phenomena aloft is observed below 900 feet and no layer aloft was reported at this height in the previous observation.

A2.3. Visibility. When the prevailing visibility decreases below or, if below, increases to equal or exceed any of the values listed below:

| Visibility | Visibility |
|-------------|---|
| 3 Miles | 7/8 Miles |
| 2 3/4 Miles | 3/4 Miles |
| 2 Miles | 1/2 Mile |
| 1 5/8 Miles | |
| 1 3/8 Miles | |
| 1 1/4 Miles | |
| 1 Mile | 1/4 Mile (Only if Blizzard Warning issued) Supplement |

A2.4. Runway Visual Range (RVR). RVR will be reported when the prevailing visibility is 1SM or less and/or RVR is 6,000 feet or less. Additionally, a SPECI observation will be taken when:

A2.4.1. RVR for active runway decreases to less than or if below, increases to equal or exceed:

A2.4.1.1. 6,000 feet

A2.4.1.2. 5,500 feet

A2.4.1.3. 5,000 feet

A2.4.1.4. 4,500 feet

A2.4.1.5. 4,000 feet

A2.4.1.6. 2,400 feet

A2.4.2. Prevailing visibility conditions for reporting RVR are first observed (\leq 1SM) and when the conditions are observed to no longer exist.

A2.4.3. RVR is first determined as unavailable (RVRNO) for the runway in use, and when it is first determined that the RVRNO report is no longer applicable, provided conditions for reporting RVR exist.

A2.5. Tornado, Waterpout, or Funnel Cloud.

A2.5.1. Is Observed.

A2.5.2. Disappears from sight or ends.

A2.6. Thunderstorms.

A2.6.1. Begins (Note: A SPECI is not required to report the beginning of a new thunderstorm if one is currently reported).

A2.6.2. Ends.

A2.7. Precipitation.

A2.7.1. Hail begins or ends (\geq 1/4 inch).

A2.7.2. Freezing precipitation begins, ends, or changes intensity.

A2.7.3. Ice pellets begin, ends, or changes intensity.

A2.7.4. Any other type of precipitation begins or ends. (Except for hail and freezing precipitation, a SPECI is not required for changes in type or the beginning or ending of one type while another is in progress e.g., snow changing to rain and snow).

A2.8. Wind Shifts. Any directional change of 45 degrees or more in less than 15 minutes and the wind speed throughout the shift is 10 knots or more.

A2.9. Squall. A strong wind characterized by a sudden onset in which the wind speed increases by at least 16 knots and is sustained at 22 knots or more for at least 1 minute.

A2.10. Miscellaneous.

A2.10.1. Volcanic ash cloud is first observed.

A2.10.2. Upon resumption of observing function. A SPECI will be taken within 15-minutes after the weather technician returns to duty following a break in observing coverage or augmentation at the unit unless a record observation is filed during that 15-minute period.

A2.11. Aircraft Mishap – The AN/FMQ-19 will be checked to make sure it is operating properly and the latest observation (i.e., METAR/SPECI/OMO) is in the system. If in backup mode an observation will be taken IAW AFMAN 15-111. The FMQ-19 manager will retrieve the archived surface observation data from AN/FMQ-19 as required by the requesting agency.

Attachment 3

FORECAST SPECIFICATION AND AMENDMENT CRITERIA

A3.1. Specification Criteria. The TAF will specify the time of occurrence, the duration, and the intensity (if applicable) of expected weather conditions. The following weather criteria will be specified in TAFs if expected to occur during the forecast period:

A3.1.1. Ceiling is forecast to decrease less than, or if below, is forecast to equal or exceed any of the following levels:

A3.1.1.1. 2000 feet

A3.1.1.2. 1000 feet

A3.1.1.3. 700 feet

A3.1.1.4. 200 feet

A3.1.2. Visibility is forecast to decrease less than, or if below, is forecast to increase to equal or exceed any of the following values:

A3.1.2.1. 3 miles

A3.1.2.2. 2 miles

A3.1.2.3. 1/2 mile

A3.1.3. Surface winds

A3.1.3.1. Change in wind speed of 10 knots or more.

A3.1.3.2. Onset, duration, and intensity of wind gusts.

A3.1.3.3. A change in prevailing wind direction of more than 30 degrees when the predominant wind speed or gust is expected to be 15 knots or more.

A3.1.4. Icing and/or turbulence (CAT II aircraft) at or below 10,000 feet AGL not associated with thunderstorms.

A3.1.5. Weather warning criteria will specify the onset, duration, and intensity.

A3.1.6. Altimeter settings.

A3.1.6.1. The onset of altimeter settings meeting or exceeding 31.00 INS or if above 31.00 INS is forecast to drop below 31.00 INS.

A3.1.6.2. The onset of altimeter setting dropping below 28.00 INS or if below 28.00 INS is forecast to increase above 28.00 INS.

A3.1.7. Thunderstorm onset and duration.

A3.1.8. Temporary conditions onset and duration.

A3.1.9. Changes to predominant conditions (BECMG or FM group) and specify the onset, duration, and intensity (if applicable).

A3.2. TAF Amendments. Forecasters will ensure the TAF is representative of expected or actual conditions. The TAF will be amended by the 26 OWS for the following:

A3.2.1. When the ceiling or visibility is observed, or later forecast, to increase or exceed, or decrease to less than any of the following levels, and was not specified in the TAF:

| <u>Ceiling</u> | <u>Visibility</u> |
|----------------|-------------------|
| 2000 feet | 3 miles |
| 1000 feet | 2 miles |
| 700 feet | 1/2 mile |
| 200 feet | |

A3.2.2. Surface winds.

A3.2.2.1. Wind speed is in error by 10 knots or more.

A3.2.2.2. Wind gust speed is in error by 10 knots or more.

A3.2.2.3. Prevailing wind direction is in error by more than 30 degrees and winds are 15 knots or more.

A3.2.3. The beginning or ending of icing and/or turbulence (Cat II aircraft), not associated with thunderstorms, from the surface to 10,000 feet (AGL), which first meets, exceeds, or decreases to less than moderate (or greater) intensity and was not specified in the forecast.

A3.2.4. Weather warning criteria occurs, or are expecting to occur during the forecast period but were not specified in the forecast or weather warning criteria specified in the forecast but are no longer expected to occur during the forecast period.

A3.2.5. Altimeter setting meets or exceeds 31.00 INS and was not specified in the forecast or if above, drops below 31.00 INS and was not specified during the forecast period.

A3.2.6. Altimeter setting drops below 28.00 INS and was not specified in the forecast or if below 28.00 INS, increases above 28.00 INS and was not specified in the forecast.

A3.2.7. Thunderstorm has incorrect forecast start or end time.

A3.2.8. Temporary conditions.

A3.2.8.1. Forecast conditions specified as temporary become predominant conditions.

A3.2.8.2. Forecast conditions specified as temporary do not occur as forecast.

A3.2.8.3. Forecast conditions specified as temporary are no longer expected to occur.

A3.2.9. Changes to predominant conditions (BECMG or FM group).

A3.2.9.1. Forecast change conditions occur before the beginning of the specified period of change and are expected to persist.

A3.2.9.2. Forecast change conditions do not occur after the specified time.

A3.2.9.3. Forecast change conditions are no longer expected to occur.

A3.2.10. Forecast conditions are not considered representative of existing or forecast conditions and amending the forecast improves safety, flight planning, operations efficiency, or assistance to in-flight aircraft.

Attachment 4

WEATHER OBSERVATION, FORECAST AND WWA CODE BREAKDOWN

A4.1. Automated/Augmented METAR/SPECI Weather Observation Code

| | | | | | | | | |
|---------------|-------|---------|-----------------|--------------|--------|------------|------|--------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| (METAR/SPECI) | KPOB | 281506Z | (COR/AUTO) | 17013G22KT | 1 | R23/5500FT | TSRA | BKN015 |
| 10 | 11 | 12 | 13 | 14 | | | | |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↑ |
| OVC030 | 76/75 | A2999 | RMK A02 TSB1506 | PRESRR SLPNO | PA -27 | DA +1443 | | |

A4.1.1. Type of Report

A4.1.1.1. Metar Observation (METAR). An observation taken routinely in accordance with AFMAN 15-111.

A4.1.1.2. Special Observation (SPECI). An observation taken as a result of one of the special criteria (listed in Attachment 2) being met.

A4.1.1.3. Local Observation (LOCAL). An observation taken when the FMQ-19 pressure sensor is inoperative (See paragraph 2.7.3.).

A4.1.2. Station identifier – also called the ICAO. This code identifies the location of the observation (in this case Pope Field).

A4.1.3. Date/Time. This is the date and time, in Zulu, or GMT, that the last element of the observation was observed.

A4.1.4. Report Modifier. A report modifier (**COR**) identifying report as a correction, or **AUTO** indicating the weather observation is a fully automated report with no human intervention.

A4.1.5. Wind. This portion of the observation provides the wind direction (first 3 numbers, VRB for variable, or 000 for calm), sustained wind speed (next 2 or 3 numbers), and wind gusts (any numbers following the G, if there have been any) measured in knots. One knot equals 1.14 miles per hour.

A4.1.6. Visibility. Provides prevailing visibility from the designated point of observation in statute miles.

A4.1.7. Runway Visual Range (RVR). 10-minute RVR or varying RVR in hundreds of feet.

A4.1.8. Present weather. Any weather occurring at the observing location, obscurations to vision, or other phenomena. The table below lists the present weather codes.

Table A4.1. Weather Phenomena Codes.

| Qualifier | | Weather Phenomena | | |
|-----------|------------|-------------------|-------------|----------------|
| Intensity | Descriptor | Precipitation | Obscuration | Other |
| - Light | MI | DZ | BR | PO |
| | Shallow | Drizzle | Mist | Well Developed |

| | | | | |
|------------------------------|-----------------------------------|--|----------------------------------|---|
| | | | | Dust/Sand Whirls |
| Moderate | PR Partial | RA Rain | FG Fog | SQ Squall |
| + Heavy | BC Patches | SN Snow | FU Smoke | FC Funnel Cloud, Tornado, or Water Spout |
| VC Vicinity | DR Low Drifting | SG Snow Grains | VA Volcanic Ash | SS Sandstorm |
| | BL Blowing | IC Ice Crystals | DU Dust | DS Dust Storm |
| | SH Showers | PL Ice Pellets | SA Sand | |
| | TS Thunderstorms | GR Hail | HZ Haze | |
| | FZ Freezing | GS Small Hail or Snow Pellets | PY Spray | |
| | | UP Unknown Precipitation | | |

A4.1.9. Sky Condition. State of the sky in terms of sky cover, layers and heights, ceilings, and obscurations. They fall into the following categories:

A4.1.9.1. Sky Cover Amount

| | |
|-----|--|
| SKC | Sky Clear (Absence of clouds or obscuring phenomena). |
| FEW | Trace through 2/8ths of sky coverage. |
| SCT | Scattered; 3/8ths to 4/8ths of sky coverage. |
| BKN | Broken; 5/8ths to 7/8ths of sky coverage. |
| OVC | Overcast; 8/8ths of sky coverage. |
| VV | Vertical visibility; 8/8ths sky coverage; normally used during heavy fog, indicates how far up into the fog can be seen. |

A4.1.9.2. Cloud Height. Three-digit number which provides the height of the base of the cloud in hundreds of feet (e.g. 015 equals 1,500 feet).

A4.1.10. Temperature and Dew Point. Measure of hotness/coldness of ambient air. Dew point measures saturation point temperature.

A4.1.11. Altimeter Setting. Indicates altitude above MSL of an aircraft on the ground.

A4.1.12. Remarks. Additional information added to the observation.

A4.1.13. **(PA)** Pressure Altitude. The altitude, in the standard atmosphere, at which a given pressure will be observed. (Measured in feet).

A4.1.14. **(DA)** Density Altitude. The pressure altitude corrected for virtual temperature deviations from standard atmosphere. (Measured in feet).

A4.2. Terminal Aerodrome Forecast (TAF).

| | | | | | | | | | | |
|--|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 |
| ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ | ↓ |
| <u>KPOB TAF (AMD) 2809/2915 31012G18KT 4800 BR OVC005 620208 510005 QNH2970INS</u> | | | | | | | | | | |
| 12 | | | | | | | | | | |
| ↓ | | | | | | | | | | |
| <u>TEMPO 2812/2815 SCT005 OVC020</u> | | | | | | | | | | |
| 13 | | | | | | | | | 14 | |
| ↓ | | | | | | | | | ↓ | |
| <u>BECMG 2815/2816 24010KT 9999 NSW OVC040 620406 QNH2960INS (REMARKS)</u> | | | | | | | | | | |
| 15 | | | | | | | | | | |
| ↓ | | | | | | | | | | |
| <u>TX13/2821Z TN05/2811Z</u> | | | | | | | | | | |

Note: The forecast follows the same general format as the observation with the following exceptions:

A4.2.1. Location identifier ICAO (KPOB).

A4.2.2. Message identifier (TAF).

A4.2.3. Modifier of an amended TAF (AMD).

A4.2.4. Forecast valid Date/Time – 30-hour valid period.

A4.2.5. Forecast wind group. Same as METAR code (see paragraph A4.1.5.).

A4.2.6. Forecast visibility group. Forecast in meters, rounded down to the nearest reportable value. Visibility Reportable Values are:

| <u>Statute Miles</u> | <u>Meters</u> | <u>Statute Miles</u> | <u>Meters</u> |
|----------------------|---------------|----------------------|---------------|
| 1/16 | 0100 | 1 1/2 | 2,400 |
| 1/8 | 0200 | 1 5/8 | 2,600 |
| 3/16 | 0300 | 1 3/4 | 2,800 |
| 1/4 | 0400 | 1 7/8 | 3,000 |
| 5/16 | 0500 | 2 | 3,200 |
| 3/8 | 0600 | 2 1/4 | 3,600 |
| 1/2 | 0800 | 2 1/2 | 4,000 |
| 5/8 | 1,000 | 2 3/4 | 4,400 |
| 3/4 | 1,200 | 3 | 4,800 |
| 7/8 | 1,400 | 4 | 6,000 |

| | | | |
|-------|-------|----|-------|
| 1 | 1,600 | 5 | 8,000 |
| 1 1/8 | 1,800 | 6 | 9,000 |
| 1 1/4 | 2,000 | 7+ | 9,999 |
| 1 3/8 | 2,200 | | |

A4.2.7. Forecast weather and obstruction group (see Table A4.1.).

A4.2.8. Forecast cloud and obstruction group (see A4.1.9.).

A4.2.9. Forecast icing group not associated with thunderstorms from surface to 10,000 feet AGL. (Thunderstorm forecasts imply moderate or greater icing). Icing intensity and layers (Example: 620208).

6 = Icing Indicator.

2 = Intensity (see code below).

020 = Height above surface of base of layer in hundreds of feet.

8 = Thickness of layer in thousands of feet.

| <u>Code</u> | <u>Icing</u> |
|-------------|---|
| 0 | Trace icing |
| 1 | Light icing (mixed) |
| 2 | Light icing in cloud (rime) |
| 3 | Light icing in precipitation (clear) |
| 4 | Moderate icing (mixed) |
| 5 | Moderate icing in cloud (rime) |
| 6 | Moderate icing in precipitation (clear) |
| 7 | Severe icing (mixed) |
| 8 | Severe icing in cloud (rime) |
| 9 | Severe icing in precipitation (clear) |

A4.2.10. Forecast turbulence group not associated with thunderstorms from surface to 10,000 feet AGL. (Thunderstorms already imply severe or extreme turbulence). Turbulence intensity and layers (Example: 510005).

5 = Turbulence Indicator.

1 = Intensity (see code below).

000 = Height above surface of base of layer in hundreds of feet.

5 = Thickness of layer in thousands of feet.

| <u>Code</u> | <u>Turbulence</u> |
|-------------|-------------------------------------|
| 1 | Light |
| 2 | Moderate in clear air, occasionally |
| 3 | Moderate in clear air, frequent |
| 4 | Moderate in cloud, occasionally |
| 5 | Moderate in cloud, frequent |
| 6 | Severe in clear air, occasionally |
| 7 | Severe in clear air, frequent |
| 8 | Severe in cloud, occasionally |
| 9 | Severe in cloud, frequent |
| X | Extreme Turbulence |

A4.2.11. Lowest altimeter group (QNH). Lowest altimeter setting expected during each forecast group (Initial, BECMG, FM groups – not TEMPO groups).

A4.2.12. TEMPO change group. This code means that the conditions listed on that line may occur for periods of less than 30 minutes (+15 minutes for thunderstorms) anytime between the time frame following the TEMPO code (28/1200Z to 28/1500Z in the above example).

A4.2.13. BECMG change group. This is a code to indicate that a change to the predominant conditions will be followed by a description of all elements for which the change is forecast. The forecast conditions encoded after the BECMG group are those elements expected to prevail from the ending time of this change group to the next BECMG group or ending time of the forecast period. The conditions will change during the time period that follows the BECMG code (28/1500Z to 28/1600Z in the above example).

A4.2.14. Remarks may be used to elaborate on preceding data.

A4.2.15. Maximum and Minimum temperatures followed by time of occurrence.

A4.3. Example Weather Watches, Warnings, Advisories.

WEATHER WATCH 05-002 for POPE FIELD (KPOB)

VALID 15/1900Z (15/1400L) TO 15/2200Z (15/1700L)

POTENTIAL FOR SEVERE THUNDERSTORMS WITH DAMAGING WINDS \geq 50 KTS,

FORECAST VALUE 60 KTS AND/OR DAMAGING HAIL \geq 3/4 IN), FORECAST VALUE 2 IN.

58/CS/DJ

A4.3.1. Weather Watch

A4.3.2. Weather Warnings

WEATHER WARNING 02-019 for POPE FIELD (KPOB)

VALID 17/1721Z (17/1221L) TO UFN

OBSERVED LIGHTNING OCCURRING W/I 5 NM.

21/RW

WEATHER WARNING 02-003 for POPE FIELD (KPOB)

VALID 10/1600Z (10/1100L) TO 10/2300Z (10/1800L)

STRONG WINDS \geq 35 BUT $<$ 50 KTS NOT ASSOCIATED WITH THUNDERSTORMS, FORECAST VALUE 40 KTS.

18/MN

A4.3.3. Weather Advisory

WEATHER ADVISORY 02-030 for POPE FIELD (KPOB)

| |
|--|
| VALID 08/1408Z (08/0908L) TO UFN |
| OBSERVED SUSTAINED SURFACE WINDS \geq 15 KTS, OBSERVED AT 15 KTS |
| 08/GL |

Attachment 5

ATC COOPERATIVE WEATHER WATCH MOA

MEMORANDUM OF AGREEMENT

BETWEEN: 440 OSS/OSAW and 440/OSAT

SUBJECT: Cooperative Weather Watch

1. IAW AFMAN 15-111, Weather Units (WU) responsible for preparing surface weather observations, without regard to the mode of operation, will establish a cooperative weather watch with Air Traffic Control (ATC). Of primary concern is the report of tower visibility different from the prevailing surface visibility, local Pilot Reports (PIREP), and any occurrence of previously unreported weather conditions that could affect flight safety or be critical to the safety or efficiency of other local operations and resources.
2. The 440 WU will task certify new tower personnel to evaluate and take limited visibility observations. Tower controllers will use the following process to become certified:
 - a. Study Air Training Guide 60, (Tower Visibility Guide), dated 31 Jan 10 and reference Air Force Manual 15-111, (Surface Weather Observations), dated 27 Feb 13 to gain the knowledge necessary to complete the tower visibility examination.
 - b. Watch a power point slide presentation on some weather observing challenges unique to Pope Field and on disseminating PIREPS to the WU.
 - c. After completing the items above, visit the WU to receive an orientation and take the tower visibility examination.
 - d. Log completion of task certification on AF IMT 3622.
3. When tower personnel observe a visibility condition less than 4 miles and is significantly different from the last disseminated observation weather personnel will reevaluate the visibility to determine if the FMQ-19 is operating correctly or needs to be logged out and **back-up** implemented. If the WU is closed and tower personnel see a significant difference between what is being reported by the FMQ-19 and is affecting current operations, call the on-call weather technician to discuss the situation. **(Note: Sometimes during rapidly changing ceiling and visibility conditions it takes time for the sensors to catch up with actual observed conditions.)**
4. The WU will use Operational Risk Management to **supplement** for a weather condition that is restricting surface visibility and it is beyond the capability of the FMQ-19 to detect (i.e. fog bank).
5. Weather technicians will do the following when **backing-up** or **supplementing** the FMQ-19 for visibility:
 - a. Notify the tower, as soon as possible, whenever the prevailing visibility at the official weather observation point decreases to less than or increases to equal or exceed 4 statute miles.
 - b. Re-evaluate the surface prevailing visibility, as soon as practicable, upon initial receipt of a differing control tower value and upon receipt of subsequent reportable changes at the control tower.
 - c. Use control tower values of prevailing visibility as a guide in determining the surface visibility when the view of portions of the horizon is obstructed by buildings, aircraft, etc.

6. Certified control tower personnel will alert the weather technician, via hotline, when the following weather changes occur:
- a. Tower visibility decreases to less than, or increases to equal or exceed 4 statute miles.
 - b. Tower visibility is less than 4 statute miles and different from the surface prevailing visibility.
 - c. A PIREP is received (pass to weather within 5 minutes of receipt).
 - d. Precipitation begins or ends.
 - e. Any indication of convective activity (lightning, rain showers or cumulonimbus clouds on the horizon.)
 - f. Rapid development, clearing, lowering, or rising of cloud layers.
 - g. Any weather condition that could have an impact on the safe operation of the airfield.
7. If the airfield closes, airfield leadership will ensure the runway lights be left on for the RVR sensors to work properly in case the possibility exists for an emergency aircraft divert into Pope Field.

//Signed//
RONALD L. HOOVER, Civ, USAFR
Weather Operations Manager

//Signed//
J. MARCO WALTON, Civ, USAFR
Air Traffic Manager

Attachment 6

MOA BETWEEN POPE AIR FORCE BAND AND FORT BRAGG



DAIM ZA

Attachment 6

DEPARTMENT OF THE ARMY
 ASSISTANT CHIEF OF STAFF FOR INSTALLATION MANAGEMENT
 800 ARMY PENTAGON
 WASHINGTON, DC 20310-0800

Memorandum of Agreement
 Between
 Pope Air Force Base
 And
 Fort Bragg

SUBJECT: Memorandum of Agreement Establishing Senior Airfield Authority at Pope Army Air Field, Fort Bragg, NC

1. References

- a. 2005 Defense Base Realignment and Closure Commission Report to the President Recommendation #103
- b. DoDI 4000.19, "Interservice and Intragovernmental Support," 9 August 1995
- c. Memorandum, DAIM-ZA, 15 Dec 09, subject: Joint Guidance to Realign Pope Air Force Base, NC to Fort Bragg, NC

2. Purpose: To comply with Memorandum, DAIM-ZA, 15 Dec 09, subject: Joint Guidance to Realign Pope Air Force Base, NC to Fort Bragg, NC (reference c), provide a common framework, identify definitions, roles and responsibilities, tasks, and key milestones for the post BRAC Senior Airfield Authority (SAA) at Pope Army Airfield (AAF) after Transfer of Authority from the USAF.

3. Situation: The Air Force will transfer real property accountability at Pope AFB to the Army. Subsequent to this transfer, the 43rd Airlift Wing (43 AW) will inactivate and the Air Force will establish the 43 Airlift Group (AG) as a non-flying unit on newly established Pope Army Airfield. The Air Force will perform Airfield Operations functions and the permanently assigned Airlift Wing (440th AW, AFRC) will be staffed to perform these duties.

4. Scope: Based on reference c, the USAF will perform airfield operation functions in the following areas: Air Traffic Control (ATC) operations, airfield management services, airfield/ATC systems maintenance, safety, and weather. The Army will provide general installation security IAW Army Common Levels of Support and provide Weapon System Security (WSS), Restricted Area Security (RAS) to Air Force standards.

5. Roles, Tasks and Responsibilities

- a. Senior Commander, Fort Bragg, NC: The Senior Commander, Fort Bragg, NC (herein referred to as the "SC") is:

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(1) Responsible and accountable for creating the conditions on the installation that facilitate, integrate and synchronize the training, readiness, deployment, sustainment and reconstitution of all resident and supported forces.

(2) To provide executive oversight of Installation Management Services to the mission activities and other organizations.

b. Garrison Commander, USAG, Fort Bragg, NC. The Garrison Commander, USAG, Fort Bragg, NC (herein referred to as the "GC") will:

(1) Act as the SC's senior executive for all installation activities.

(2) Be responsible for the day-to-day operation and maintenance of installation and base support services.

(3) Maintain Pope AAF to Army Class "B" Runway standards IAW all applicable DoD Unified Facilities Criteria.

(4) Process airfield design, marking and lighting criteria waivers submitted by the SAA through Army channels IAW AR 95-2.

(5) Ensure all Army operated functions at Pope AAF will be performed and inspected IAW Army/Senior Command instructions.

(6) Provide Airfield Security and Crash/Fire/Rescue support (per reference c, para. 4b & 4c).

c. Pope AAF Senior Airfield Authority (440th AW AFRC), Fort Bragg, NC (herein referred to as the "SAA") is/will:

(1) Defined as follows: "At Pope AAF, the Senior Airfield Authority is the designated individual responsible for Operational Control of the airfield, to include runways, associated taxiways, parking ramps, land and facilities whose proximity affect airfield operations." The 43rd Airlift Group and Air Force Special Operations Command (AFSOC) assigned units will maintain operational control of all their facilities on the airfield.

(2) Responsible for overall Airfield Operation, Safety of Flight and effectiveness of Pope AAF as a Joint Forcible Entry/Strategic Deployment Platform.

(3) Submit requests for waivers to airfield design, markings and lighting criteria through the Ft Bragg Garrison Command channels IAW Army requirements in AR 95-2. The SAA will include a recommendation from the USAF MAJCOM.

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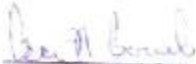
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- (4) Serve as the focal point to both the USAF and Army Chains of Command for all issues regarding Airfield Operations at Pope AAF
 - (5) The Commander of the Air Force designated, permanently assigned, Air Force Airlift Wing. Any transfer of SAA between the Army and the Air Force will be approved jointly by HQDA and HAF.
 - (6) The Senior USAF Liaison Officer to the SC and GC for all airfield operations issues and airfield facilities operated by the Air Force and Pope AAF.
 - (7) Serve as the approval authority for airfield access and coordinate for airfield security and Crash/Fire/Rescue support with the GC.
 - (8) Attend all meetings established by the SC and GC requiring a subject matter expert on Airfield Operations at Pope AAF. (The SAA may send a designated representative from the staff.)
 - (9) Exercise operational control of the Pope AAF environment and act on behalf of the SC and GC as the approval authority of all operational requirements for daily aviation/non-aviation use of the airfield and its facilities that impact, or relate directly to, Airfield Operations or Safety of Flight, IAW with AR 95-2, paragraph 13.6.
 - (10) Ensure all Air Force operated functions will be performed and inspected IAW the Air Force/MAJCOM instructions of the SAA and performed by the USAF, including higher headquarters inspections/evaluations.
 - (11) Serve as the waiver authority for operational waivers for USAF aircraft that impact aircraft movement areas such as runways, associated taxiways, parking ramps, land and facilities whose proximity affect airfield operations.
6. All funding and resources will be IAW reference c, or as provided for in any future funding agreements between the two parties. Any changes to the roles, tasks, and responsibilities outlined in this agreement must be mutually agreed to by both parties. This agreement will remain in effect until terminated by either party, or superseded by a newer agreement.
7. Effective date: Date of signature

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 Army Air Field

8 Fort Bragg Garrison POC is Mr. David Yow, BRAC Transition Specialist, Directorate of
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david.yow@us.army.mil

 16 May 11
 RICK LYNCH
 Lieutenant General, USA
 Assistant Chief of Staff
 for Installation Management

 21 APR 2011
 CRAIG N. GOURLEY Maj Gen, USAF
 Vice Commander, Air Force Reserve
 Command

End
 1. Applicable Service Guidance

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Enclosure 1

Applicable Service Guidance

- d. DOD Initial Guidance for BRAC 2005 Joint Basing Implementation, 22 Jan 08
- e. DODI 6055-06, DOD Fire & Emergency Services Program National Fire Codes, 21 Dec 06
- f. UFC 1-300-08, Unified Facilities Criteria (UFC), Criteria for Transfer and Acceptance of DoD Real Property, 16 Apr 09
- g. UFC 3-260-01, Airfield and Helipport Planning and Design, 17 Nov 08
- h. UFC 3-260-02, Pavement Design for Airfields, 30 Jun 01
- i. UFC 3-260-03, Airfield Pavement Evaluation, 15 Apr 01
- j. UFC 3-535-01, Visual Air Navigation Facilities, 17 Nov 05
- k. UFC 3-600-01, Fire Protection Engineering for Facilities, 16 Jan 04
- l. Army FM 3-04.300, Airfield and Flight Operations Procedures, Aug 08
- m. AR 95-2, Airspace, Airfields/Heliports, Flight Activities, Air Traffic Control, and Navigational Aids, 16 Oct 08
- n. AR 385-10, The Army Safety Program, 3 Sep 09
- o. AR 420-1, Army Facilities Management, 28 Mar 09
- p. AR 190-11, Physical Security of Arms, Ammunition, and Explosives, 15 Nov 06
- q. AR 190-51, Security of Unclassified Army Property (Sensitive and Non-sensitive), 30 Sep 93
- r. AR 190-13, The Army Physical Security Program, 30 Sep 93
- s. AR 190-16/AFJI 31-102, Physical Security, 31 May 91

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- t AFI 13-213, Airfield Management, 29 Jan 08
- u AFI 13-204, Volumes 1-3, Airfield Operations Career Field Development, Airfield Operations Standardization and Evaluations, Airfield Operations Procedures and Programs respectively, 1 Sep 10
- v AFI 32-1042, Standards for Marking Airfields, 27 Oct 05
- w ETL 04-2, Standard Airfield Pavement Marking Schemes with Change 1, 19 Jul 04
- x AFI 13-216, Evaluation of Air Traffic Control and Landing Systems (ATCALS), 5 May 06
- y AFI 31-101, Integrated Defense (FOUO), 8 Oct 09
- z AFJI 15-157/AR 115-10, Weather Support for the U.S. Army, 30 Jun 96
- aa AFMAN 15-129, Air and Space Weather Operations - Processes and Procedures, 21 Jun 04
- bb FAA Order JO 7110.65T, Air Traffic Control, 26 Aug 10
- cc AR 600-20 Army Command Policy, 30 Nov 2009